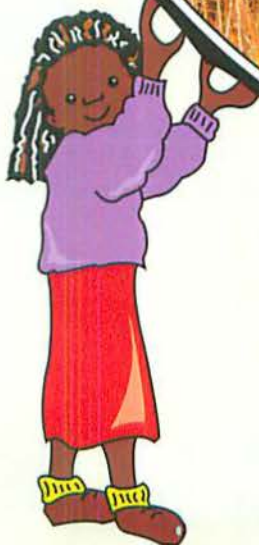
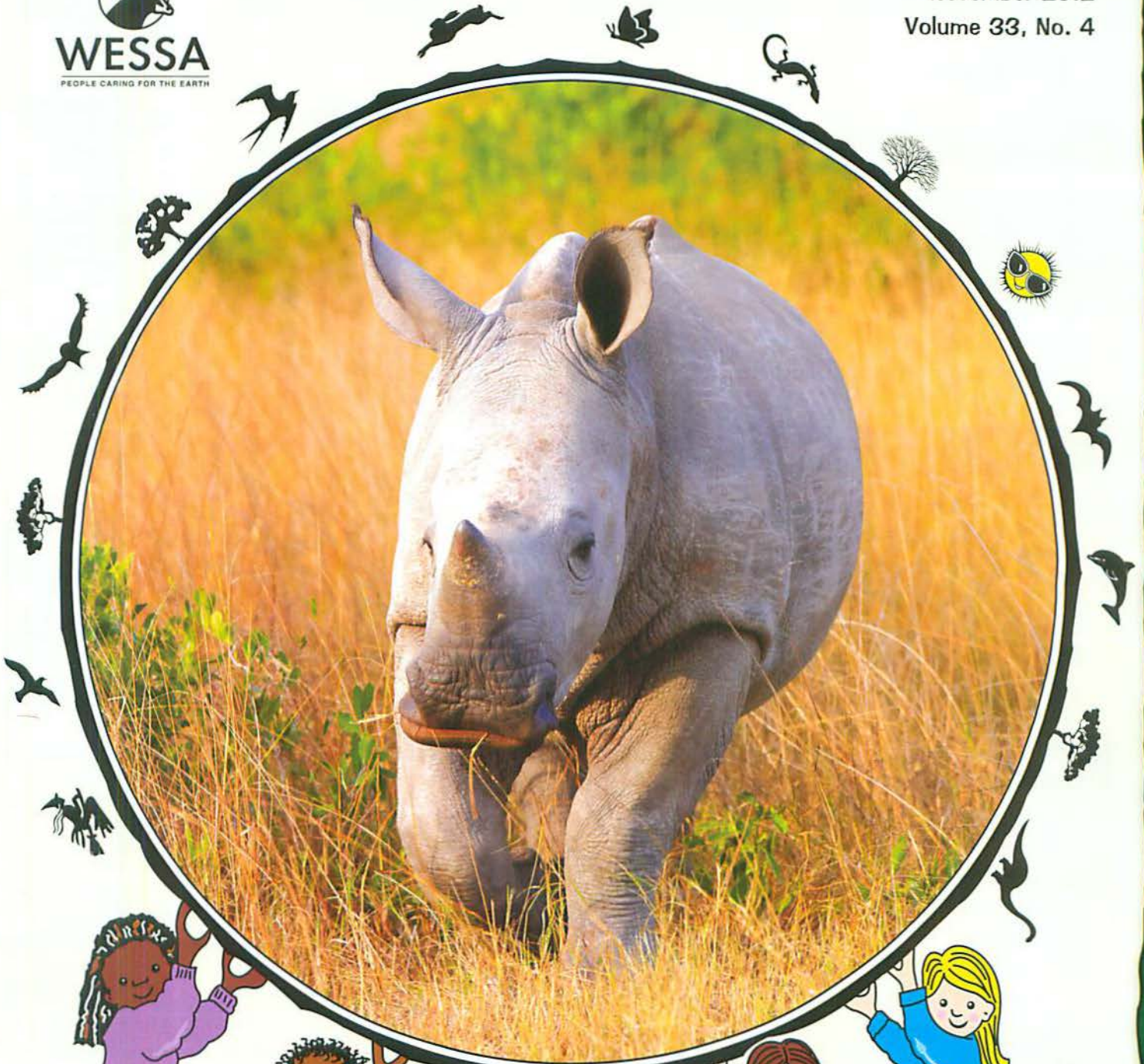


EnviroKids™


WESSA
PEOPLE CARING FOR THE EARTH

November 2012
Volume 33, No. 4



SAVING RHINOS

Kids caring for the Earth



AWARDS

SA Nature Foundation Merit Award
Specialist Press Association Award 1992 & 1999
SAB Environmental Journalist Merit Award 2007

EnviroKids™

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SAVING RHINOS

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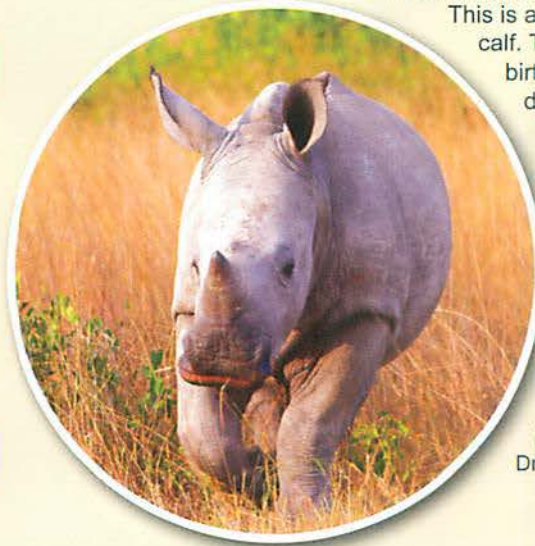
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Front cover:

This is a young White rhino calf. The mother gave birth to her calf in dense bush. The calf could stand within an hour of birth, but was wobbly for several days. It drinks milk from its mother for a year, but started eating grass when 2 months old.

Photo © Hedrus/
Dreamstime.com



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CARING ABOUT BIG GAME

Southern Africa is famous for its very large animals – often called big game. People come from all over the world to see them in our wilderness areas.

The biggest animals by weight and size are:

1. Elephants up to 7 000 kg
2. White rhinos up to 4 500 kg
3. Hippopotamus up to 3 000 kg
4. Black rhinos up to 1 800 kg

People love to walk in nature and visit game parks. Anyone who has been lucky enough to do this will know what a special experience it is. Game parks and nature reserves conserve the environment and protect wildlife. They also show us how the land had looked before we built our towns and cities.

Today, our wild animals are threatened by poaching. Animals inside parks, and the many still living in wilderness areas outside, are no longer safe. A new wave of poaching rhino horns for medicine and dagger handles is sweeping across South Africa. This could threaten our rhinos with extinction.

3 Reasons to care about our rhinos and big game

- Nature, together with its large and small animals, provides us with many services that are important for our health and survival.
- Together with all other life forms, we are a part of Earth's web of life. If we harm the links in the web, we eventually harm ourselves.
- Every year more animals are becoming extinct because of human activities. It is up to us to protect them so that future children can enjoy them too.

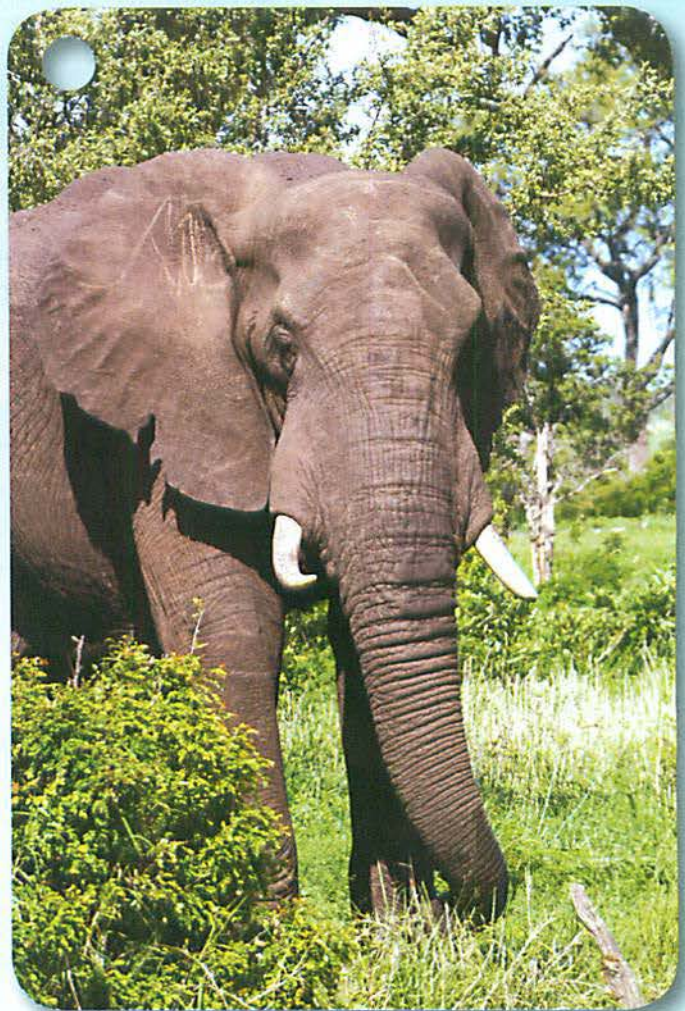


Photo Luke Harwood/Media Clubs SA



Photo Chad Hocking

Some examples of nature's services

- Plants and animals provide medicine and other useful products such as wood, paper, cloth and dyes.
- Plants and animals give us food: meat, grains, beans, fruits and vegetables.
- Insects, mice, bats and birds pollinate flowers.
- Birds, big game animals, monkeys, apes and other animals eat and disperse seeds in their poo. The seeds grow into new plants and trees.
- Plants absorb carbon dioxide and provide us with oxygen to breathe.
- Wetlands provide us with clean water.

Find out more about rhinos in this issue. 

MEET THE RHINOS

Rhinos have been around for many millions of years. The large horn on the rhino's head is made from the same substance as our hair and fingernails. Modern rhinos are all big animals able to grow to 1 000 kg or more in weight. They all eat vegetable matter, have a very thick skin with little or no hair, and they only have one baby at a time.

Black Rhino

Hi!

I'm a young Black rhino with my mum. We look red because we have just had a lovely mud bath. I am also called a hook-lipped rhino because of my pointed upper lip. I'm a browser and use my hooked lip to eat leaves and thorny branches from trees and shrubs. We usually hang out in thick bush. My mother always makes me walk behind her so that she can clear a path for us through the bush. I will stay with her for two-and-a-half years and after that I will live alone.



Photo K Stromayer/Wikimedia Commons

Black rhino facts

Black rhinos are smaller than White rhinos, their backs sag in the middle, and their heads are usually held up. They have two horns on their head, the one in front being the largest. Rhinos have poor eyesight, excellent hearing with large rounded ears, and a good sense of smell. Black rhinos are shy, but bad tempered when threatened, **so it is best to be kind and keep a safe distance from them.**

Weight: Males 850–1 600 kg (females are smaller)
Shoulder height: 150–175 cm
Lifespan: 40–45 years
Gestation period: 15 months
Population size: 4 800 (Critically endangered)

White Rhino



Photo Luke Harwood/Media Club SA

Hi!

I'm a White or Square-lipped rhino. My square lip is shaped for grazing grass on open plains, which is where you will most likely see me. I am sociable and live in a small group called a crash. I will not leave my mother's side until I am two-and-a-half years old. On the plains, the predators come from behind so mum makes me walk in front of her and guides me with her horn to protect me from danger. I need protection from lions, elephants, and territorial male rhinos.

White rhino facts

White rhinos are bigger than Black rhinos, their ears are pointed and their backs are flat with a bump near the middle. Like the Black rhino, they have two horns on their head. Rhinos are very heavy, but can run at about 45 km per hour over short distances. The average human only runs at about 10 km per hour.

Weight: Males 2 000–2 300 kg (females are smaller)
Shoulder height: 177–200 cm
Lifespan: 40–45 years
Gestation period: 16 months
Population size: 20 700 (Near-threatened)

Hi!

I'm an Indian or Greater one-horned rhino and presently live in a zoo. I have a new, tiny baby that is very shy and is busy drinking my milk. Indian rhinos are the biggest of all the rhino species. We can often be found wallowing in the wetlands and forests of Nepal and India. We are grazers, but also enjoy eating a variety of water plants. Not only can I run fast, but I'm also an excellent swimmer.

Indian Rhino



Photo Rhino Resource Centre

Indian rhino facts

These rhinos have large folds of thick skin all over their bodies, which looks like armour plating. Unlike South African rhinos, Indian rhinos only have one horn.

Weight: 1 800–2 700 kg
Shoulder height: 175–200 cm
Lifespan: 40–50 years
Gestation period: 15–16 months
Population size: 2 900 (Vulnerable)

Sumatran Rhino

Photo wAlantb/Wikimedia Commons



Hi!

I'm a baby Sumatran rhino and live in a zoo. There are not many of us left in the wild. Only 10 live in zoos now, but once there were many more of us. In the past, some of my family even worked in the circus. My parents originally came from an island called Sumatra in Indonesia and lived in tropical rainforests where they fed on leaves and fruit. Adult Sumatran rhinos usually live alone and are known for their ability to move quickly and silently through the forest.

Sumatran rhino facts

Sumatran rhinos are the smallest of all rhino species and they are quite hairy. Their skin is reddish-brown and they are the only Asian rhinos with two horns.

Weight: 600–950 kg
Shoulder height: 100–150 cm
Lifespan: 30–45 years
Gestation period: 15–16 months
Population size: 220 (Critically endangered)

Hi!

I'm a female Javan rhino. There are only about 45 of us left in the wild, which makes us one of the world's rarest large mammals. We were once widespread throughout South East Asia, but are now only found on the tropical island of Java in Indonesia. I live in rainforests and wetlands and love to have mud baths. At night I browse on the branches and leaves of trees.

Javan Rhino

Javan rhino facts

Javan rhinos look similar to Indian rhinos, but are smaller and the skin-folds do not stand out as much. While males have a horn, females only have a small knob or none at all.

Weight: 900–2 300 kg
Shoulder height: 170 cm
Lifespan: 30–40 years
Gestation period: 15–16 months
Population size: 45 (Critically endangered)



Photo Alain Compost/Rhino Resource Centre

A RHINO'S LIFE



Rhinos are interesting animals that show some typical behaviours and habits.

THE RHINOCEROS FAMILY

The word 'rhinoceros' comes from two Greek words: *rhino* meaning 'nose' and *ceros* meaning 'horned'. Rhinos are mammals, the females give birth to live young and make milk to feed their calves. They don't need to lie in the sun to keep warm like cold-blooded crocodiles and lizards, because like humans, their bodies make their own heat. Rhinos also have hair growing through their skin, the same as humans.



A calf drinks milk from its mother.



Rhinos like nothing better than having a good wallow in mud.

MUDDY BUDDIES

Rhinos spend a large part of each day relaxing and rolling about in muddy pools. This is called wallowing. It keeps them cool on hot days and the mud protects their skin from the sun's hot rays. Wallowing also gets rid of biting parasites

like ticks and flies - they stick to the mud on the rhino's body and fall off when the mud dries. Sometimes the rhinos rub the mud off on rubbing posts such as trees, rocks or termite mounds. They often have a favourite spot for doing this, and use it every day until the post is rubbed smooth.

Did you know?

Zebras, horses and tapirs are the closest living relatives of the rhino. These mammals have hooves with an odd number of toes. Rhinos have three toes - two smaller side ones and a large middle toe.

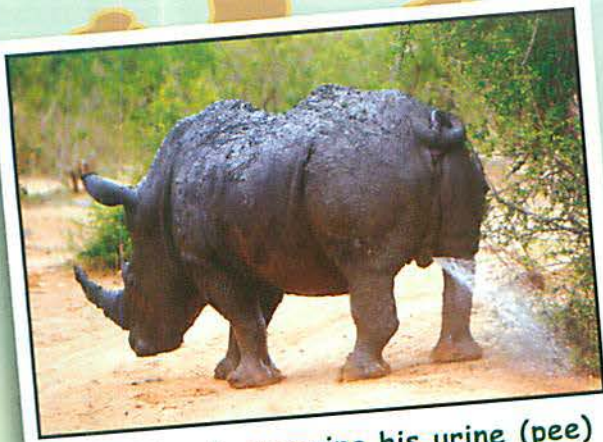


Photo AWL Archives



Rhinos having fun at a mud beauty parlour.

Rhinos are not the only animals that use mud as a sunscreen. Hippos, elephants and warthogs do too. In fact, it also works for humans! There are some African communities who have worn mud or clay on their faces for millions of years, keeping their skin soft and beautiful. So now you know what to do if you forget to pack your sunscreen - enjoy a nice cool mud bath!



This rhino is spraying his urine (pee) over a bush to mark his territory.



This rhino is spreading dung with his feet.

SMELLY SIGNPOSTS

Full-grown male rhinos spend a lot of time defending their territories - areas of bush that they choose as homes. They do this by creating big heaps of dung, like large signposts, called middens. Dung is spread around with their hind feet and added to every day. They also scrape the ground and spray strong smelling urine on trees. This is easily smelt by other rhinos and serves as a warning to young males to keep clear. However, if an older male wishes to challenge the owner of the territory, he will add his own dung to the midden.

FOOD AND WATER

Rhinos are herbivores and only eat plant matter. They can digest their food completely without having to chew it twice like impala, giraffe and cows that chew the cud. Sometimes rhinos will also chew on soil to get extra minerals.

Because rhinos eat so much grass, they must drink water at least twice a day to help their digestion. They usually do this late in the afternoon or evening when the weather is cooler.

FANTASTIC FRIENDS

Ox-peckers and rhinos have a very special relationship. The birds' shrill alarm calls warn rhinos of approaching danger. Ox-peckers eat ticks and keep the rhinos well groomed.

RHINO FACTS

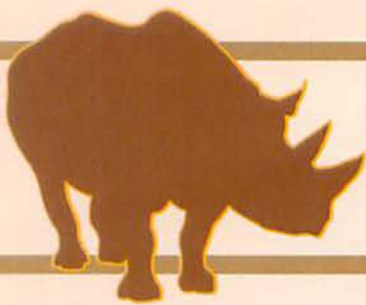
- African rhinos have the longest horns and use them to ward off predators.
- Besides wallowing, rhinos also have dust baths, rub and scratch themselves against trees, visit and lick places where the soil is salty, and often enter swamps.
- White rhinos are far less excitable and dangerous to people than Black rhinos.
- Rhinos make sounds that vary from loud puffing snorts of alarm to high-pitched squeals.



A rhino standing in mud.



Red-billed ox-peckers keeping watch (left) and a rhino fast asleep in a mud bath (right).



RHINOS IN

Three out of the five rhino species worldwide are regarded as 'Critically Endangered'. This means that they could become extinct in the next 30-50 years! Only the Indian rhino, and the White rhinos of southern Africa are still doing reasonably well, but this may not be for long!

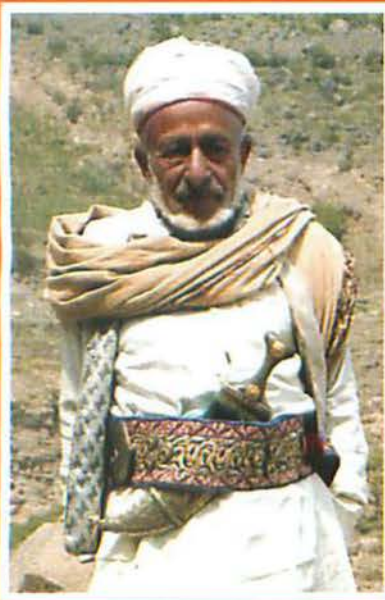


Black rhino

Photo R Ruggiero/Wikimedia Commons

Why are rhinos threatened today?

Worldwide, rhinos are being hunted by poachers for their horns. In many Asian countries the powder from ground rhino horn is thought to cure illnesses such as fevers, headaches and skin diseases. The horn is also used in Yemen to make carved handles for 'jambiya' (a short curved dagger). The men wear them as a status symbol. Although world trade in rhino horn was made illegal in 1975, a lot of money can be made by selling poached rhino horn. One horn can be worth as much as one million US dollars! Gangs of poachers are now killing more rhinos than ever before.



In Yemen a jambiya is a part of everyday wear.

Photo Jialiang Gao/Wikimedia Commons



In Eastern countries rhino horn is sold as medicine.

Photo Rhino Resource Centre

The tragedy of the Northern White rhinos

There are two types (subspecies) of White rhino. The Northern White rhino was once found across several African countries - southern Chad, the Democratic Republic of Congo (DRC), southern Sudan and Uganda. But in 1960 there were 2 000 rhinos left, and poaching finally reduced the population to four animals living in the Garamba National Park in the DRC in 2008. Today, they are extinct in the wild. However, four captive rhino were found in a zoo in Czechoslovakia and have been moved to a strongly protected game farm in Kenya. Called the 'Fab Four', Suni, Sudan, Najin and Fatu are now part of a new breeding programme to save them from extinction.



A Northern White rhino.

Photo John Lucas/Rhino Resource Centre

TROUBLE



Southern White rhinos: an early success story

The Southern White rhino was once found across Southern Africa, but after intensive hunting by early settlers, it was considered extinct. Then in 1894, a population of about 50 rhinos was found in northern Kwa-Zulu Natal. Umfolozi, Hluhluwe and Lake St Lucia* game reserves were quickly established, and thanks to their careful protection and distribution to other parks, Southern White rhinos now number about 20 000 animals. These are the only rhinos not classified as 'Endangered'.



Photo Ivana Cinkova/Rhino Resource Centre

White rhinos at Hluhluwe.

South Africa's rhinos are under threat - again!

Despite the strong protection that has allowed our black and white rhino numbers to grow, poaching has increased in South Africa since 2008. Last year 448 rhinos were killed in South Africa and by the end of this year the numbers will be greater. South Africa is home to more than half the world's remaining rhinos and poachers, are hunting them for their very valuable horns.



Photos Solilo Ranch/Rhino Resource Centre

A group, or crash, of White rhinos.

How is this happening?

Today, poaching is a very well-planned operation using helicopters and veterinary drugs to dart the rhinos and make them sleep. Poachers on the ground then cut off the horns and leave the rhinos to die. The horns are smuggled out of the country and sold to buyers in the East. Many game parks now have rhino anti-poaching patrol teams that guard the rhinos and try to stop poachers. However, the rangers often do not have the equipment needed to fight the well-armed poachers. Fortunately, many people worldwide are now joining forces to fundraise and take action to help save the rhinos.



Photo Durrace/Stockphoto

A game ranger on patrol.

Rhino horn myths

Rhino horn is made of keratin – the same material as your hair and nails! The horn grows throughout the animal's life. Scientific studies on rhino horn powder have shown that it is unable to cure disease.

**SAVE
THE
RHINOS**

So how can you help?

Keep yourself informed about rhinos by visiting the website: www.rhinos.org/just-for-kids. See the next pages for ideas.

* Lake St Lucia is now called the iSimangaliso Wetland Park



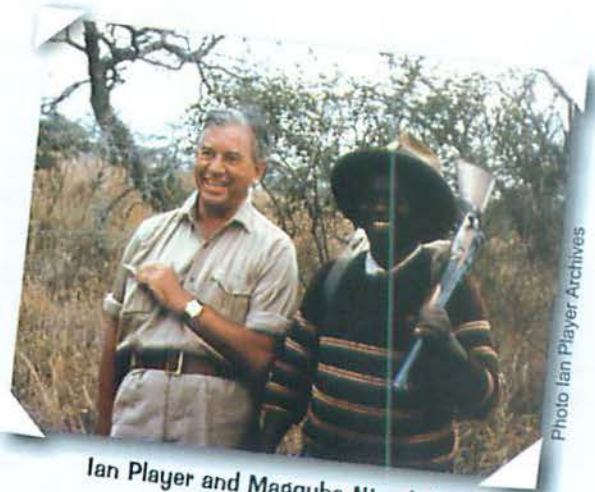
SAVING RHINOS



Here are some of the stories about what people are doing to help save our rhinos.

OPERATION RHINO

In 1960 there were only about 650 Southern White rhinos left in South Africa following years of hunting and poaching. Ian Player, a game ranger with Natal Parks (now Ezemvelo KZN Wildlife), realised that keeping many rhinos in only one park made them easy targets for poaching and the spread of disease. Together with his good friend, Magquba Ntombela, he started Operation Rhino and moved groups of White rhinos to other parts of the country. Breeding rhinos were also sent to zoos and safari parks outside of South Africa, so that the species would survive if poaching continued. Ian Player also started anti-poaching networks in game reserves.



Ian Player and Magquba Ntombela.

Photo Ian Player Archives



Everyone gets a copy of Bongi's Quest.



Chris and Spoon telling their story at a school.

WRITING BONGI'S QUEST

Chris Daniel, zoologist and wildlife guide, recently wrote a children's story called **Bongi's Quest*. It's about a young rhino who's uncle has been killed and his horn removed. Bongi's quest is to find out what happened, and why the horn was taken. The book has been a huge success and has already reached children in 12 countries worldwide. It will soon be printed in Chinese for children in China.

Chris and his friend, Spoon, have also started their Kruger National Park Edu Ride project, where 250 000 copies of *Bongi's Quest* will be given to children living in villages around Kruger National Park where the most rhinos have been killed. In this way children and communities are being made aware of the poaching problem and the importance of protecting rhinos and our natural heritage. *Bongi's Quest* has the SANParks anti-poaching details on the back so that children can call and report poacher activities in their areas.

* see www.africaneducationalstories.co.za | www.facebook.com/groups/BongisQuest



Bongi's Quest is for ages 4-10 years.

See page 13 to win one of 5 signed copies.

Protecting the last Northern White rhinos

Some of the last Northern White rhinos (page 8) have been moved to a sanctuary in Kenya. The Ol Pejeta Conservancy breeding programme hopes to reintroduce the Northern White rhinos to their wilderness home one day. Recently the male has taken an interest in one of the females and perhaps a baby will be born in the future. Keep up to date on the latest news of the Fab Four at: <http://olpejetaconservancy.org/>



Photo Balian Craig Ol Pejeta Conservancy

The Northern White rhinos now living in Kenya. Their horns have been cut so that they are less attractive to poachers.

Photo © Dlugoska/iStockphoto



A baby White rhino.

SAVING Rhino Orphans

The poaching crisis is leaving many baby rhinos without their mothers. The Endangered Wildlife Trust is training rangers and vets to hand-rear the little orphans. They are also setting up sanctuaries where the babies can be raised to adulthood.



Rhino Sniffer Dogs

The Endangered Wildlife Trust is training sniffer dogs to smell out rhino horn products in cargo before it is loaded onto airplanes. Rico, a two-year old Belgian Malinois, will help to identify criminals who smuggle rhino horn out of the country. Dogs are also useful in anti-poaching units. They can track down poachers, and even smell out guns used by the poachers.



Photo Claire Patterson-Abrolat

Rico the Belgian Malinois at work.



Photo Marissa Daniels

A Rhino Day Run on 22 September at Crossways Farm Village near Port Elizabeth.

South Africans Say **NO** TO POACHING!

Many companies have found creative ways to raise money for anti-poaching equipment such as guns, boots, bullets, or radio tracking collars for rhinos. Some shops sell rhino bracelets or rhino shopping bags to raise funds and some people jump out of airplanes to 'Skydive for Rhinos'. Others run marathons like the 'Rhino Run', and a few brave South Africans walked across Hluhluwe-iMfolozi Park as part of project 'Rhino Reality'. Paul Jennings and Siboniso Phakhati even walked across the whole of South Africa to raise money – they called it the Great Rhino Trek! A group of South African musicians, from Zahara to Goldfish and Locnville and Johnny Clegg, have produced a CD called **Save our Rhinos** to raise funds for these endangered animals.

Check out

www.savetherhino.org/rhino info/for kids
for fun
things to do.



WESSA HELPING RHINOS

Rhino horn is 'big-business' and worth more than gold in East Asian countries. This means that poachers are very well paid and can use expensive technology such as helicopters for hunting rhinos or escaping from the police. It makes catching poachers, and the people who hire them or sell rhino horn, extremely difficult.



Heave- ho! Making the rhino comfortable.



This rhino has been darted and is falling asleep.

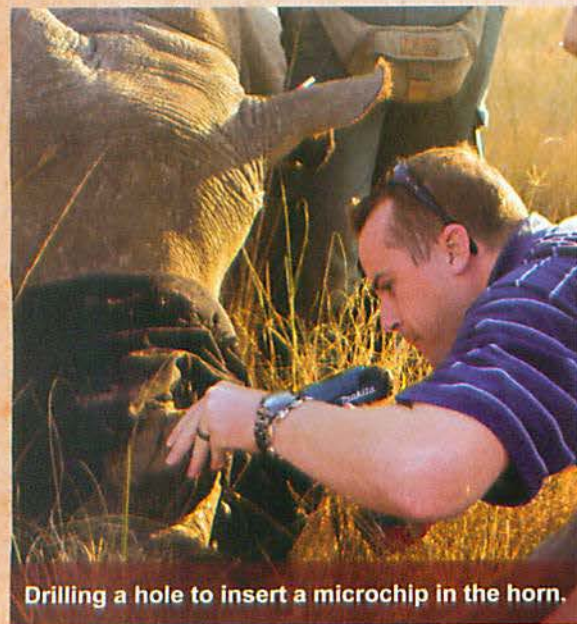
Because rhino poaching is so well organised, WESSA believes that it is more effective for all rhino organisations to work together as a team to beat poaching. As a result, WESSA is working on several different anti-poaching activities with other partners and organizations. Besides helping with gathering information and advice on law-making, WESSA is raising funds for rhinos (www.wessa.org.za) and is involved with projects.

FIELD RANGER TRAINING

One of the best ways to prevent poaching is to have enough field rangers patrolling reserves on foot. WESSA is working with organisations such as EWT, the Game Ranger's Association of Africa and SA Wildlife College to train field rangers so that they have the right skills to do their jobs. This includes training in the best methods of tracking rhinos and poachers, and how to collect evidence at a poaching crime scene so that it can lead to the prosecution of a poacher in court.

DNA AND MICROCHIPS

Each rhino has its own unique DNA (a genetic fingerprint) just like humans do. WESSA is involved in sponsoring the DNA sampling and micro-chipping of rhinos across South Africa. The information will be stored in a database that will help police to trace every rhino horn back to where it came from. This will help to link evidence presented in court cases to the poachers.



Drilling a hole to insert a microchip in the horn.



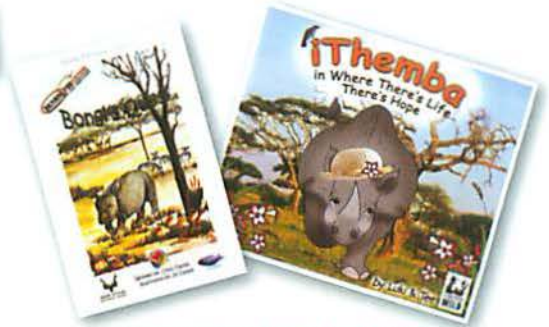
Measuring the horn.

MICROCHIPS

Vets place an electronic chip under the skin of an animal, or in its horn. This does not hurt the animal. Each chip has its own identifying number and can be read using a hand-held scanner. The chip numbers are registered in a database that has information about the animals and where they live. In this way animals, or their horns, can easily be identified.

JUST 4 FUN

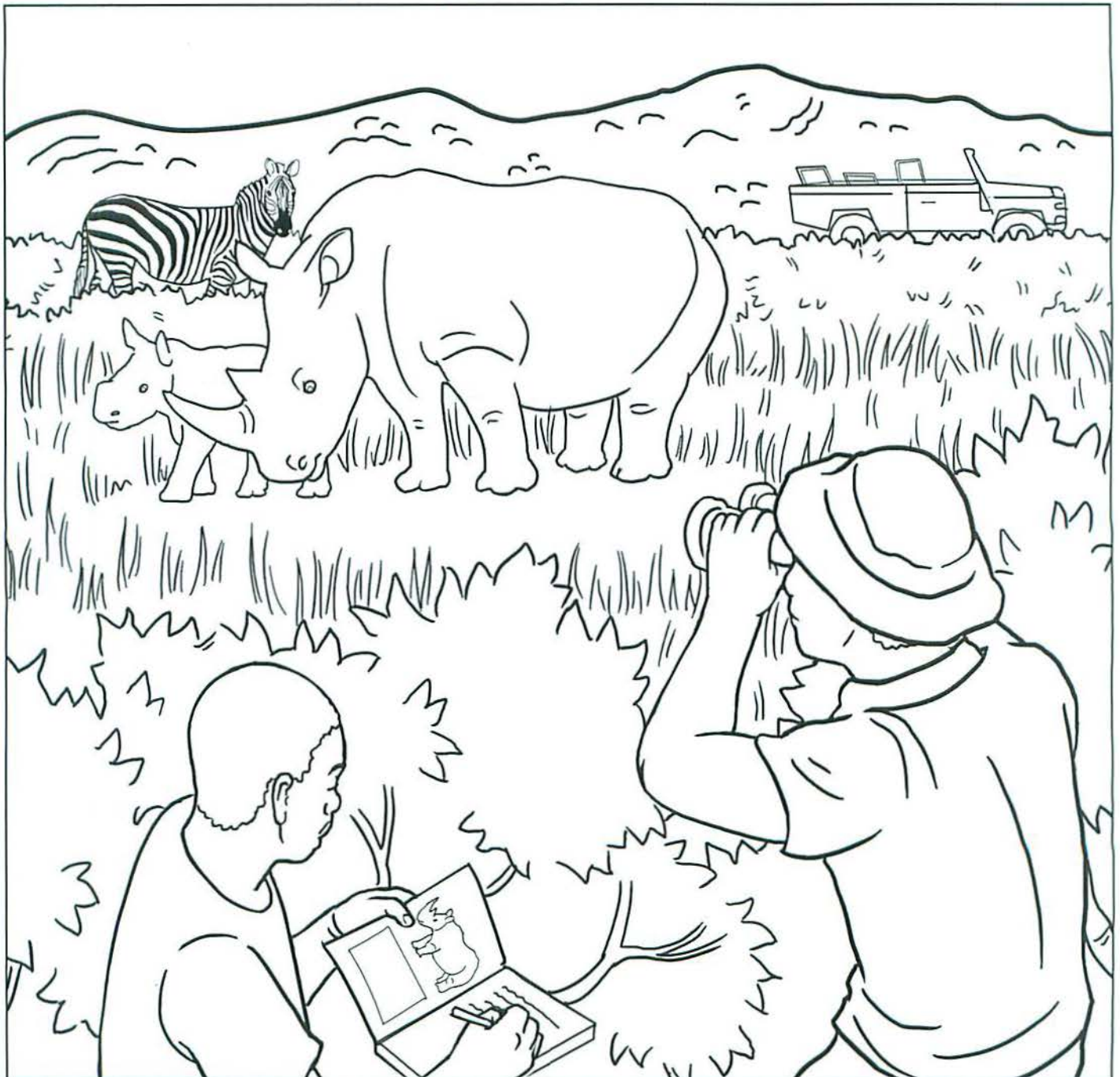
WHITE RHINO COLOUR-IN



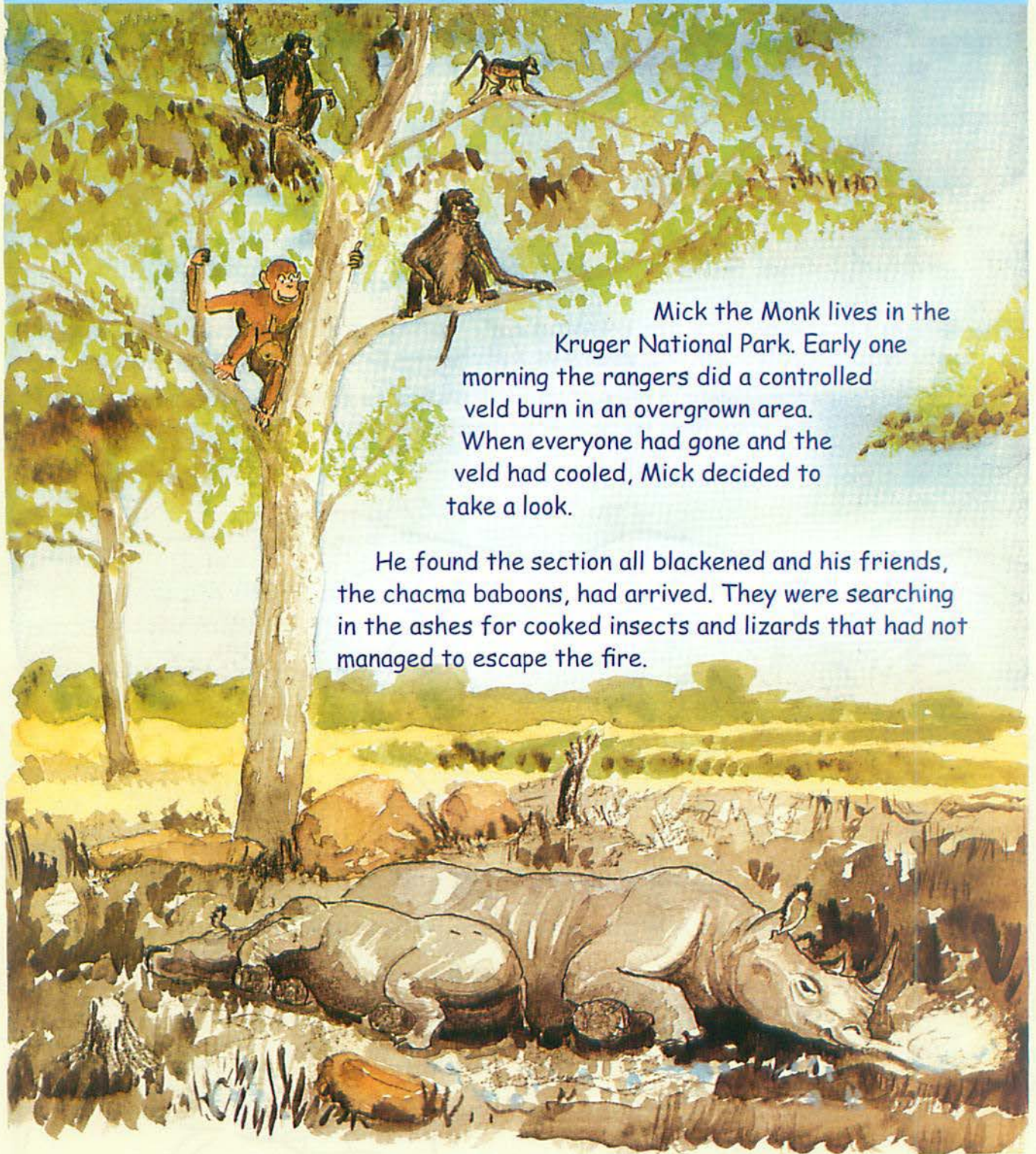
3 sets of books to be won and 2 consolation prizes, see p.18. Entries judged according to age group

The rangers in the picture are keeping watch on the mother White rhino and her calf. Who do you think the zebra is watching – the rhinos or the rangers?

Photocopy this page then colour in the picture with love and care. Attach a completed copy of the entry form on page 27 and send it to *EnviroKids*.



Story: **MICK AND THE WHITE RHINOS**



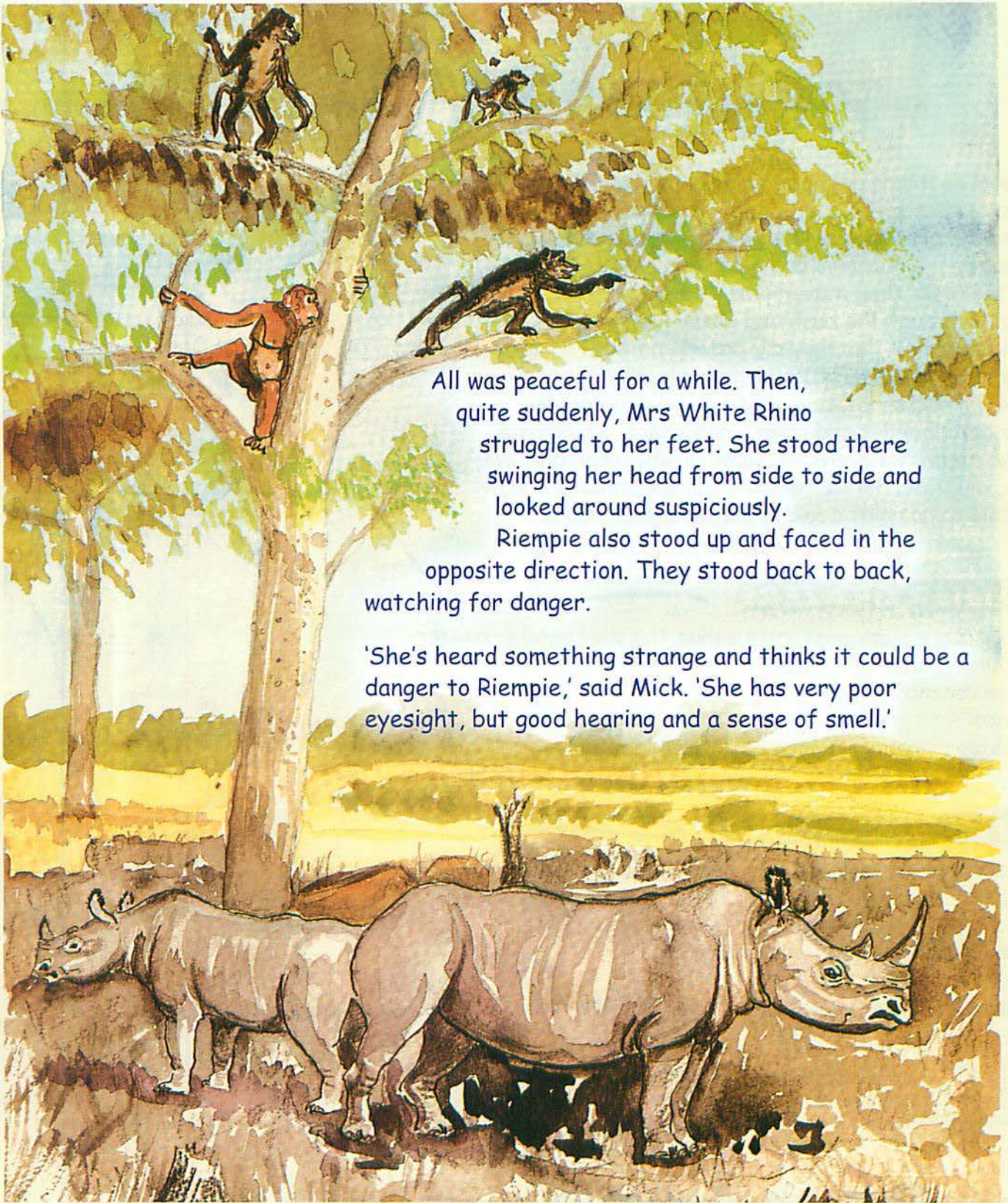
Mick the Monk lives in the Kruger National Park. Early one morning the rangers did a controlled veld burn in an overgrown area. When everyone had gone and the veld had cooled, Mick decided to take a look.

He found the section all blackened and his friends, the chacma baboons, had arrived. They were searching in the ashes for cooked insects and lizards that had not managed to escape the fire.

Suddenly the baboon lookout gave a sharp warning bark. The baboons scampered into a knobthorn tree, followed by Mick. They sat on the branches and watched quietly as Mrs White Rhino and Riempie, her son, appeared.

The rhinos found a spot of shade under the tree and lay down in the ashes. They had chosen that place to rest - probably because there were no ticks and insects to worry them.

Every time that Mrs White Rhino puffed, she blew up a cloud of white ash. 'Now there's a pretty picture,' said Chacma quietly.



All was peaceful for a while. Then, quite suddenly, Mrs White Rhino struggled to her feet. She stood there swinging her head from side to side and looked around suspiciously.

Riempie also stood up and faced in the opposite direction. They stood back to back, watching for danger.

'She's heard something strange and thinks it could be a danger to Riempie,' said Mick. 'She has very poor eyesight, but good hearing and a sense of smell.'

'It's all right,' said Chacma. 'I can see from here that it is only the ranger driving around to check the burned area.'

But, Mrs White Rhino was not taking any chances. She turned and nudged Riempie with her horn and they trotted off with Riempie running ahead as fast as he could.

As the baboons returned to their insect hunt, Mick sat in the tree and watched the rhinos slow down and stop some distance away. They soon decided that there was no further danger and settled down to eat the grass.

RHINOS IN THE

Because rhinos are huge animals they affect the lives of many of the smaller species* around them. The browsing of Black rhinos and the grazing activities of White rhinos can change the numbers and types of plants in the area. Their movements create paths through the bush and grassland, and the pools that they dig provide homes for frogs and insects. Rhino poops fertilise the soil, spread seeds, and provide food and homes for dung beetles and other small insects. Rhinos are also homes for parasites, some of which can only live on, or inside, rhinos. Here are some examples of how White rhinos play a role in the savannah web of life.



OTHER GRAZERS

White rhinos graze grass until it is short. This short grass is preferred by other grazers such as zebra and wildebeest, so they are often more common in areas where the 'lawn has been mowed' by rhinos! Short grass does not burn as well as long grass, so fires are less common where White rhinos graze.

FLIES AND BEETLES

White rhinos eat up to 100 kg of grass every day and much of it ends up as poop. The poop both fertilises the soil, and is food for many types of flies and dung beetles. Some dung beetles feed and lay their eggs on the poop, while others roll away the poop and bury balls of it in the ground to lay their eggs in it. The dung provides food for their larvae when they hatch.



PARASITIC BOTFLIES

Rhino botflies are completely dependent on rhinos and are among the largest of all flies (4 cm long). The females lay their eggs around the horns and on the faces of rhinos. When the maggots hatch they make their way into the rhino's stomach where they attach themselves with spines and mouth-hooks. When fully grown they let go and come out with the poop. The maggots then pupate in the soil and 6 weeks later adult flies emerge to mate and seek another rhino. Adult flies live only 3-5 days and never feed. Because rhino numbers are so low, their botflies are now rare. They are also hard to study and collect as they stay close to their rhino hosts.



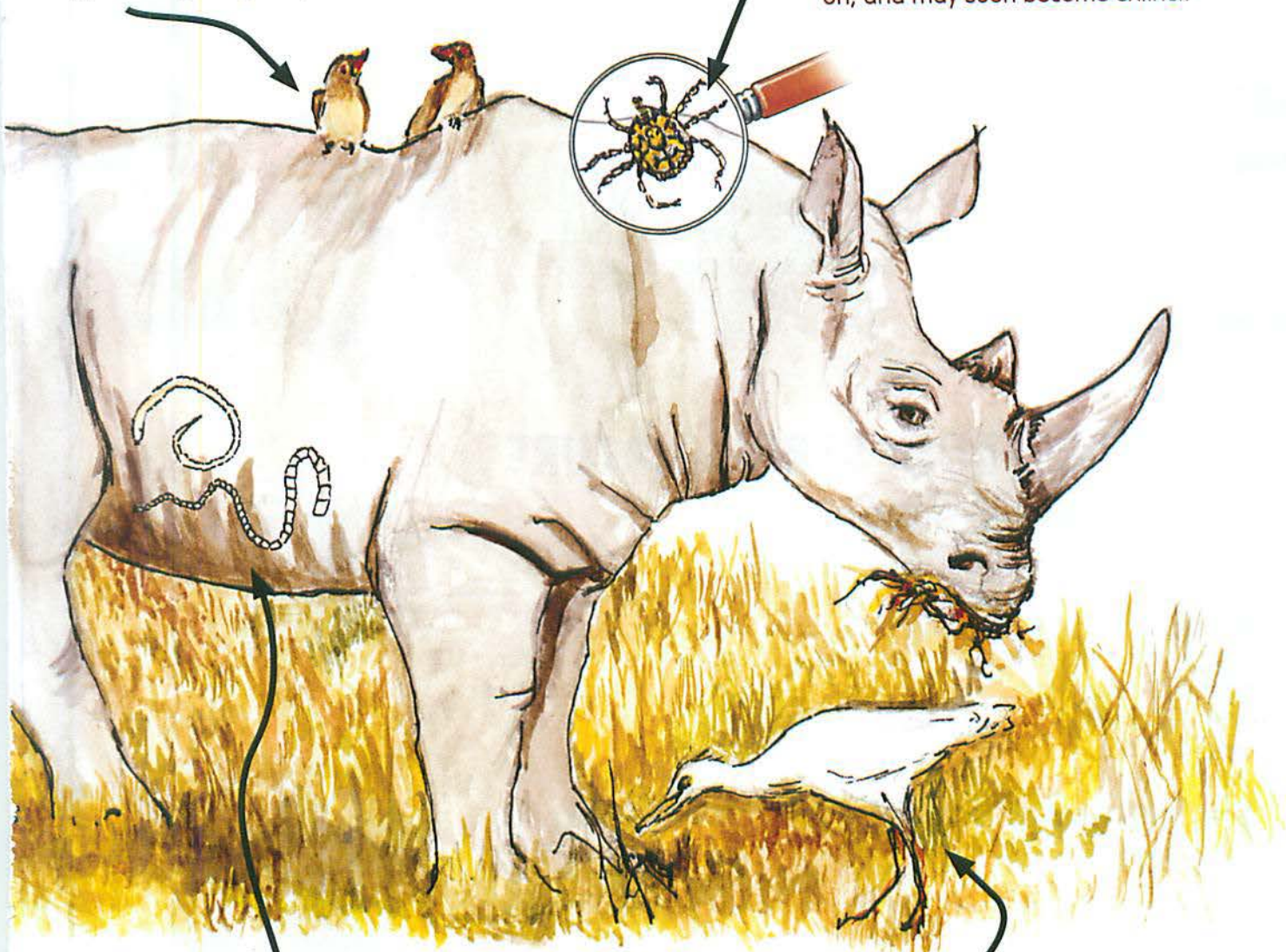
WEB OF LIFE

OXPECKERS

Oxpeckers and rhinos often occur together and both benefit from this relationship. The birds perch on the backs of rhinos, where they can see and catch passing insects. They also feed on ticks, which helps to keep the rhinos free of these annoying parasites. Oxpeckers warn the rhinos of approaching danger by their loud chirping alarm call.

TICKS

Over 40 species of tick have been collected on rhinos. Three of these ticks are only found on rhinos. Because their hosts have become so rare, the ticks have great difficulty finding new rhinos to feed on, and may soon become extinct.



WORMS

The guts of rhinos are home to at least 40 species of parasitic roundworms and tapeworms. One species of roundworm is so common that 399 million worms can be found inside a single rhino!

CATTLE EGRETS

Cattle egrets often hang out around rhinos and other large mammals so that they can pounce on grasshoppers and other insects that are disturbed as the animals walk by. In this way the egrets get more food than they would by hunting on their own.

*A species is a type of animal that only mates and produces offspring with its own kind. It does not naturally breed with other types of animals.

WHAT'S NEWS

WHAT'S NEWS FROM BOSTIK?

PRESTIK WITH STICKERS

Prestik is useful for sticking up posters and cards, but also has many other uses. The new packs now contain free funky stickers such as smiley faces and fun slogans – watch out for them in your local store.

BOSTIK STICKY TAPES

Bostik make a range of stationery tapes to suit almost every need. The *Invisible Tape Twin Pack* of mini-dispensers is great for school use. There is also a *Crystal Clear Tape*, and the *Double-sided Tape* can be used instead of glue to give a neat, invisible finish to wrapping or craft projects. See page 29 to win a hamper of useful *Bostik* products.



BOOKS FROM STRUIK NATURE

Adventure Trails In Kirstenbosch

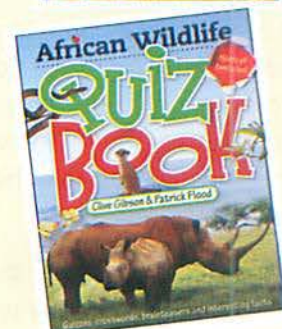
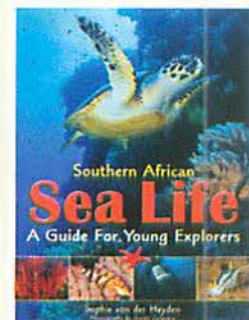
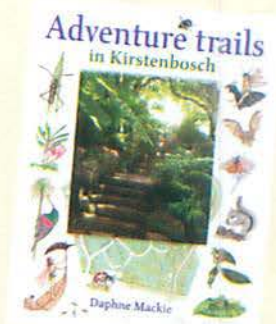
If you live near Cape Town or will be visiting for the holidays, pick up a copy of this amazing book by Daphne Mackie and take it to Kirstenbosch Gardens. This captivating book brings the garden's nature trails alive. Find enchanted forests, secret gardens and mirror pools as you use this guide to discover the plants and animals that live there. Filled with photos and delicate illustrations, this is a beautifully presented book!

Southern African Sea Life - A Guide For Young Explorers

This guide by Sophie von der Heyden combines interesting facts with many photographs and illustrations to present a wonderful variety of ocean creatures. Read about different habitats, discover plants and animals as you learn to identify the main species, and find out what you can do to help conserve our marine life. This book makes a wonderful present for young marine explorers. See page 26 to win a copy.

African Wildlife Quiz Book

This small book contains quizzes, crosswords, brainteasers and interesting facts about animals. It will keep the family entertained for hours, and has varied levels of difficulty – great for the holidays. See page 27 to win a copy.



FRY'S VEGETARIAN FOODS

In an effort to reduce the effects of climate change, many people are switching to vegetarian meals for Meat-free Mondays. Fry's Family Foods aims to help you make the switch. Their products offer tasty meat alternatives such as crispy 'chicken-style' Fry's Pops, 'mince' samoosas, vegetarian schnitzels and delicious vegetarian burgers. Fry's also make pies, veggie mince, 'braai' sausages and 'hotdogs'.



hotdogs



'mince'



mushroom pie



Pops

ROOTING FOR RHINO CHALLENGE

A group of children from **Rotary Port Alfred's Early Act Club** in the Eastern Cape challenged schools to raise awareness and funds for rhinos on World Rhino Day in September. Children from many schools in South Africa each contributed R5 and formed a human rhino. Most of the money raised from these events has gone to the protection of rhinos and the rehabilitation of rhino survivors. **Kingswood College** in Grahamstown was one of the schools that took up the challenge. Here are some photos that they sent to *EnviroKids*.

Visit www.worldrhinoday.org/ for an information pack on how to make a human rhino.

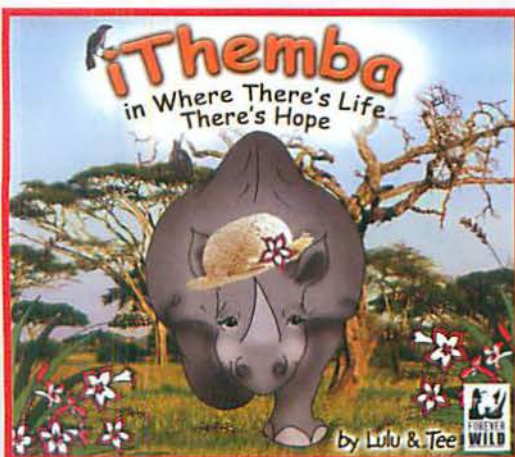


Mapping out the rhino shape with markers.



The Kingswood College human rhino.

Photos Kingswood College, Grahamstown



A RHINO STORY FOR KIDS

iThemba in Where There's Life There's Hope

Here is yet another lovely storybook by Lulu and Tee, two Mums who live in Kommetjie, Cape Town. This story is about how a rhino called iThemba and her game-ranger friend Joe foiled the wicked horn hunters one dark night. It is 'fun and educational with a touch of magic'.

See page 13 to win a copy.

ONE RIVER - FOUR NATIONS

PART 3: The Vaal sub-basin



About this series

These pages are about the Vaal River sub-basin of the Orange-Senqu River catchment (see the map) that falls entirely within South Africa. The Vaal River rises in the east near the Drakensberg highlands, and joins the Orange River in the Free State just beyond Kimberley. It has many side branches (tributaries) that rise on the Witwatersrand and in the Free State.



The economic hub of South Africa

The Vaal sub-basin is a very important economic centre for South Africa. It includes Johannesburg, the largest urban area, and the mining, industrial and manufacturing centres of the country. The basin has a long history of mining following the discovery of diamonds in 1862 along the Orange River, and later at Kimberley. Gold was first discovered on the Witwatersrand in 1886, and today asbestos, uranium, coal, manganese, and semi-precious stones are also mined. The basin contains the biggest manufacturing industries in South Africa as well as 3 coal-fired power stations to keep everything running.



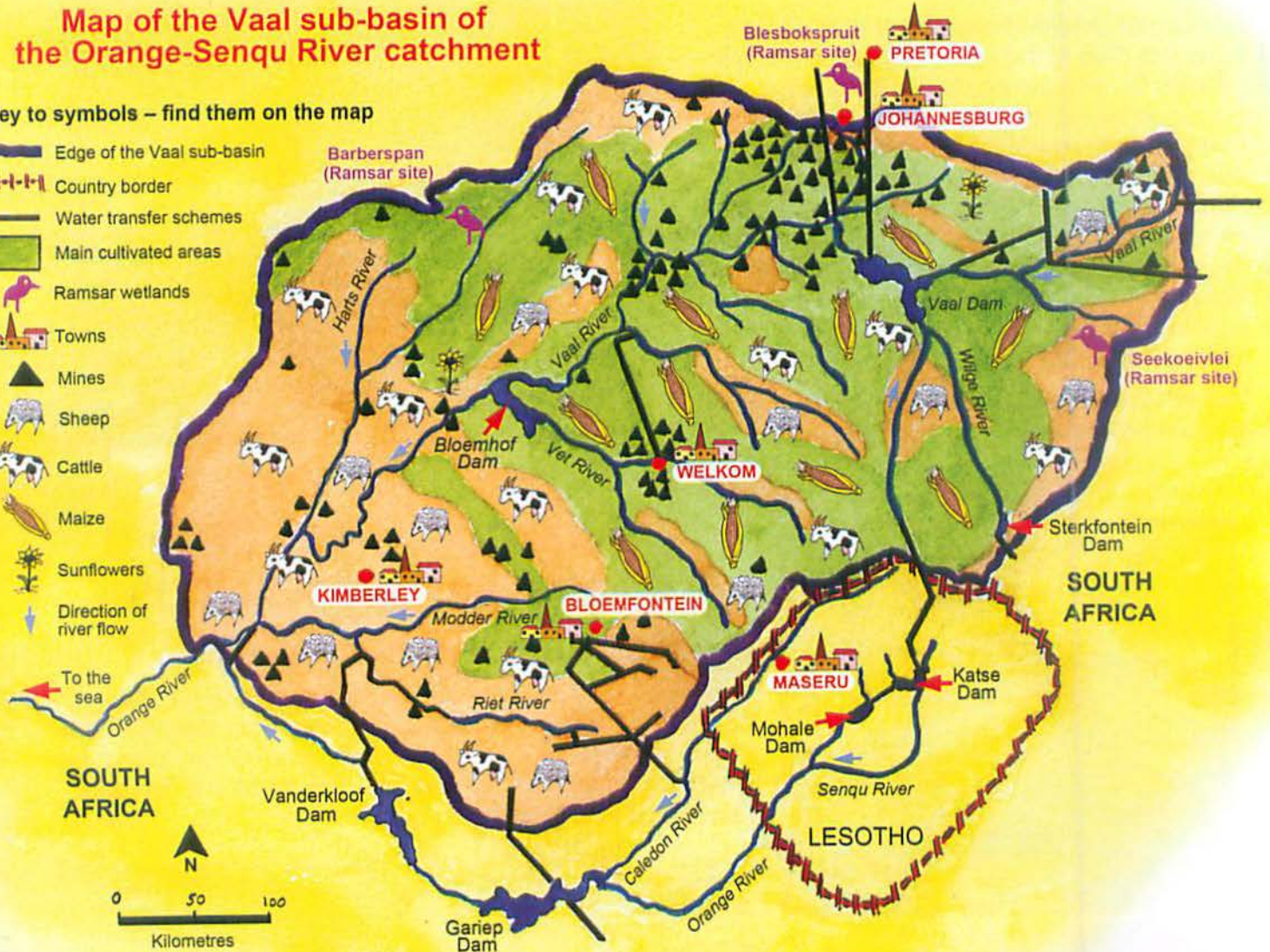
Photo: Graeme Williams/ MediaClubSouthAfrica.com

▲ A gold mine at Welkom.

Map of the Vaal sub-basin of the Orange-Senqu River catchment

Key to symbols – find them on the map

- Edge of the Vaal sub-basin
- Country border
- Water transfer schemes
- Main cultivated areas
- Ramsar wetlands
- Towns
- Mines
- Sheep
- Cattle
- Maize
- Sunflowers
- Direction of river flow



Providing for our water needs

South Africa is a dry country with irregular rainfall and frequent droughts. As Johannesburg is not located on a major waterway, it does not have enough water for its people and the surrounding mines and industries. The Vaal basin is also an important food producing area. Crops include maize, sunflower seeds, sorghum, groundnuts, and fodder to feed cattle (beef and dairy) and sheep that are farmed in the area. These activities use large amounts of water and most of the available water in the Vaal sub-basin is used for irrigation. Engineers have had to design and build several water schemes to supply more water to the area.

Important water schemes

The Vaal River Development Scheme includes the Vaal Dam (built in the 1930s) and the Bloemhof Dam (1970). Water is transferred from these dams, and the Vaal-Harts weir, to the Harts valley farmlands via concrete-lined canals. Water is also transferred to Pretoria for industries and to Rustenburg for its platinum mines. This scheme includes two water providers: the Rand Water Board that supplies the Witwatersrand, and Mid Vaal that supplies Free State Goldfields and towns with clean drinking water.

The **Lesotho Highlands Water Scheme** transfers water from Lesotho's Senqu River to the Vaal through a series of dams (Mohale and Katse) and tunnels. In return Lesotho receives royalties (payments) and hydro-electric power.

A **series of smaller dams** along the Vaal supply water to nearby towns and surrounding farmlands. Many of the dams also offer boating, water sports and fishing.

Protected wetlands

The Vaal sub-basin contains three important Ramsar sites (wetlands of international importance – find them on the map). They protect and feed a wide variety of local and migrant bird species.

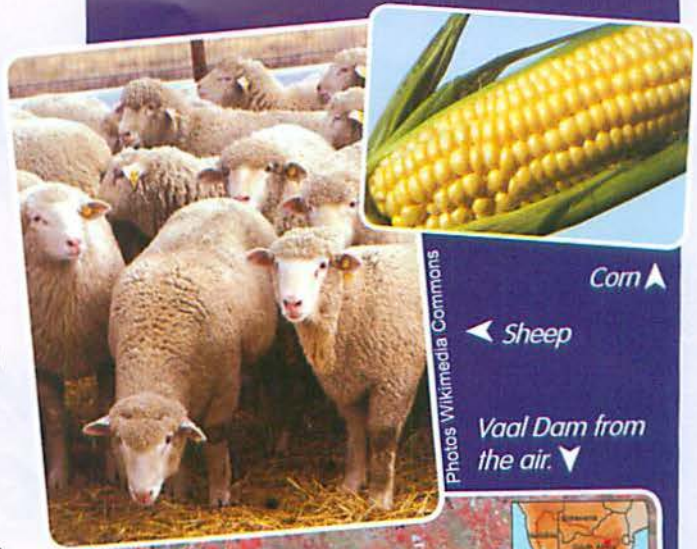
Water problems

With its huge population and demand for water, it is not surprising that there are many water problems in the Vaal sub-basin. These include:

- pollution of rivers and seepage into groundwater from mines, slimes-dams and industries.
- untreated sewage from informal settlements running into rivers and causing disease.
- too many nutrients in the water. This causes the overgrowth of alien plants and uses up the oxygen, killing plants and fish.
- runoff from farmlands where crops are sprayed with fertilisers and pesticides leads to an increase of salts and poisons in rivers and groundwater. This harms animal and plant life and is a danger to human health.

Solving the problem

The water problems in the sub-basin need to be dealt with so that downstream users do not receive polluted water. Most importantly there must be a balance between meeting water needs for humans and keeping the river flowing. All four nations in the Orange-Senqu catchment need to work together to keep the river healthy. Everyone from source to sea can benefit.



Corn ▲

◀ Sheep

Vaal Dam from the air. ▼

Photos Wikimedia Commons



Digging an underground tunnel to transfer water. ▶



Photo Mehmet Karatay Wikimedia Commons

◀ Fish eagles rely on wetlands for food.



▲ Water hyacinth, an invasive alien plant.

Green algal blooms ▶ result from excess nutrients in the water.



Photo Felix Andrews/Wikimedia Commons



WESSA
PEOPLE CARING FOR THE EARTH



Nampak
packaging excellence



PetroSA

ECO-WARRIORS AT VIRGINIA PREP.

Hello EnviroKids Readers,

Our school, Virginia Preparatory School in KwaZulu-Natal, has been an Eco-School for 4 years. We have really enjoyed learning about nature and knowing that we are helping our environment by living in a more eco-friendly way.



A Woolly-necked stork.



Some of Virginia Prep's environmental champions.

NATURE IS THE BEST TEACHER

Our school is very fortunate to be positioned between two nature areas. Our goal is to link them by making a corridor from one area to the other through our school grounds. Putting our eco-policy into practice has attracted some interesting wildlife visitors. We have regular visits from yellow-billed kites, woolly-necked storks, little bee-eaters, wagtails, sparrows, and occasionally we have seen a palmnut vulture soaring in our airspace!

WATCHING BIRDS AND BUTTERFLIES

Having nature on our doorstep has encouraged us to take part in National Big Birding Day, when for two hours, a group of 'tweeters' go out to bird watch. They record what they see and send their data via the internet to the Animal Demographic Unit (ADU) at the University of Cape Town. The information that we have sent is used for their records and scientific research, so we are helping scientists and having a fun as well. We do the same for the Butterfly Census that is held twice a year. It is a great adventure to spend the day hunting butterflies, looking up their names, and then recording the results to send to the ADU.



- ▲ Recording what we see in nature.
- ◀ A pretty butterfly.



I BELIEVE I CAN FLY!

We are very proud of our project for this year: PROJECT RHINO RESCUE. This will enable us to do our very best to draw attention to the rhino's awful situation by taking part, and educating everyone connected to our school.

Did you know that at least 455 rhino have already been poached since the beginning of the year? 55 of these were from KwaZulu-Natal!

We aim to collect as much money as possible to help keep our rhino safe. This will go towards the training and arming of rhino guards who will guard the rhinos 24/7. For 'Project Rhino Rescue' we have collected 5-cent pieces, and helped to count them for the 'Save the Rhino Fund'. We also took part in an art competition in which one of our learners, Eden Levi, won a prize. The coolest thing is that two of our teachers bravely decided to throw themselves out of an aeroplane at 10 000 feet (3 050 meters) to help the rhinos! To do this, they each had to raise a R5 000 sponsorship for the 'Save the Rhino Fund'.



- ▲ Rhino artwork.
- ◀ Advertising Project Rhino Rescue.



- ▲ Mrs Searle flying.
- ▼ Mrs Searle and Miss Thompson celebrate skydiving for rhinos.



I BELIEVE I CAN TOUCH THE SKY!

Can you believe that our school has collected a whopping R15 050 for rhinos? Not only has it given us great pleasure to know that we are helping to protect them, but we will be excited to see the DVD in which Mrs Searle and Miss Thompson jumped out of the aeroplane and came screaming with delight all the way to the ground. To prepare our VPS eco-warriors for this awesome adventure and worthy cause, the school's environmental club members wrote this poem.

SKY DIVE FOR RHINOS

By the VPS Environmental Club

Mrs Searle and Miss Thompson have taken a dare,
Which could result in them losing all of their hair.
They're going to skydive from 10 000 feet up there.
Eish! They're going to get a huge, huge scare!
So help us raise lots of money,
To see something really very funny.
All over the land we will hear their cries,
As they see their lives flash before their eyes.
Let's donate money for RHINO RESCUE,
Come on you all, that's the least you can do!
Our rhinos are not meant to die,
So go up to Eston and see our VPS warriors fly!

BE THE CHANGE YOU WANT IN THE WORLD!

CRAFTY FUN WITH RHINOS

Here are some fun things to make with a rhino theme

RHINO FRIENDS:

You need: paper/card; crayons/kokis/coloured pencils for drawing and colouring in; scissors; glue or sticky tape; wool or string.

To make:

1. Draw 2 circles 11-15 cm across. Cut them out, fold them in half and cut along the fold line so that you have half-circles. Each of these will make a cone-shaped body of an animal when you stick the pointed ends together.
2. Look at the bodies of the animals shown in the pictures and copy the lines for the arms, wings, feather patterns and colours onto 3 of the half-circles. The fourth half-circle can be used to make your own fantasy animal.
3. Pull the points of a half-circle together and use sticky tape to join them to make a cone-shaped body. Do this for all the half-

4. Copy the head and tail shapes onto card and colour and cut them out.
5. Use glue or sticky tape to attach the heads and tails to the cone bodies.
6. Draw, colour and cut out some feet for the monkey and use short lengths of wool to attach them to the monkey's body.



MAKE A RHINO FOOTPRINT:

You need: modelling clay; toothpick; paperclip; plaster of paris (about 400 g); water; strip of card (30 cm x 5 cm); paper clip.

To make:

1. Pat out a piece of clay to about 1 cm thick and 12-15 cm square.
2. Use a toothpick to draw the outline of a rhino footprint on the clay and then press the inside down to make it look as if a rhino has stood on the clay.
3. Bend the strip of card into a circle and use the paperclip to hold the ends together. Put the card circle over the
4. footprint and push it a little way into the clay.
5. Mix the plaster of paris with water until it is smooth and runny but not watery.
6. Pour the plaster gently into the ring to about 2-3 cm deep and leave it for 15 minutes or until set hard.
7. Unclip the card and peel it away, then gently ease the plaster cast off the clay and leave it to set for a day.

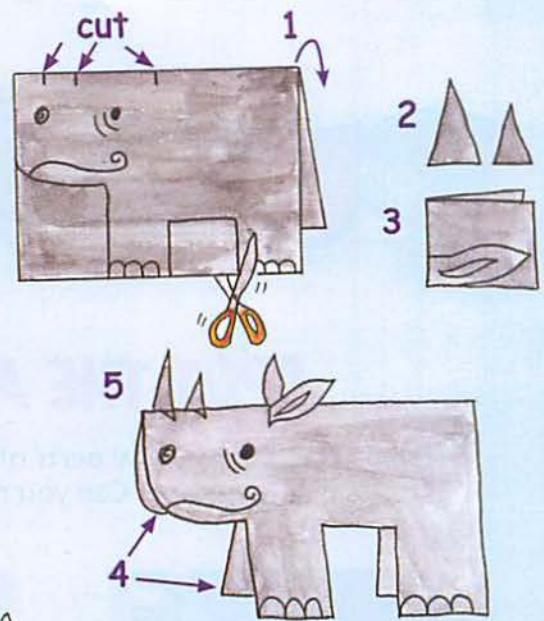


MAKE RHINO CARDS

You need: Grey card; scissors; pen or pencil; glue.

To make:

1. Fold the card in half and draw a rhino shape, face and feet on one side as shown in the picture. Keep the card folded and cut out the rhino, then make 3 short cuts in the folded edge as shown.
2. Draw and cut out 2 triangles for horns - a big one and a small one.
3. Fold a piece of card in half and draw and then cut out 2 ears.
4. Draw the eyes, mouth, nostrils and toes on the rhino.
5. Glue the horns and ears into the 3 cuts made in step 1. Write a message in the card and give it to a friend.

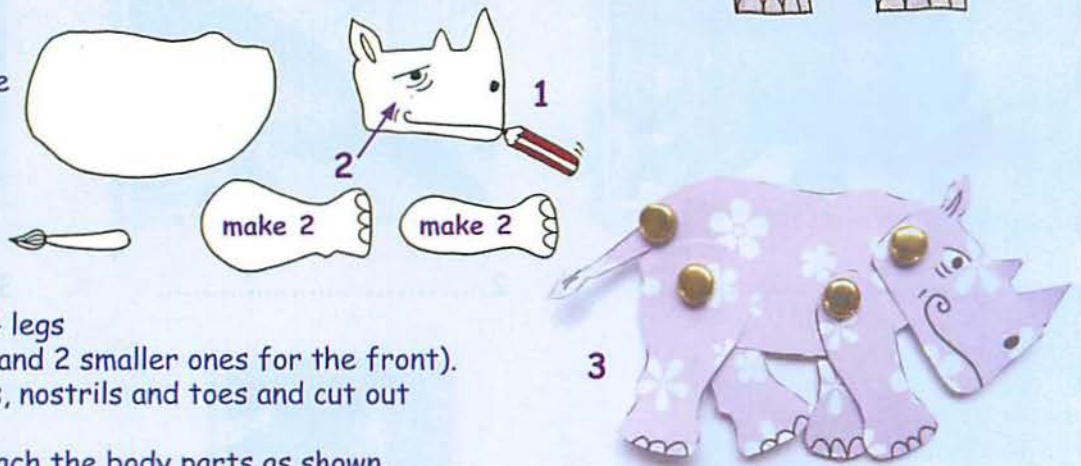


MOVING RHINO

You need: card - grey, white or patterned; scissors; drawing things; 4 split pins.

To make:

1. Draw the body-part shapes onto the card - 1 tail, 1 head, 1 body and 4 legs (2 big legs for the back and 2 smaller ones for the front).
2. Add details such as eyes, nostrils and toes and cut out the shapes.
3. Use the split pins to attach the body parts as shown.



RHINO AND FRIENDS CHRISTMAS TREE

You need: A small plant pot; small stones; 5 sticks of different lengths to make a tree shape; white card; crayons/kokis/paint to colour the animals; sticky tape; scissors; string or wool.

To make:

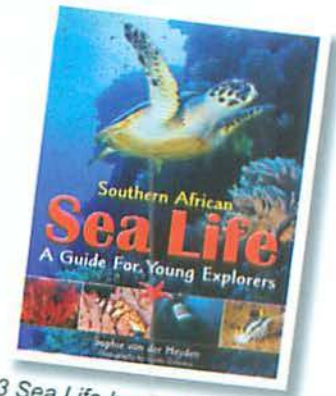
1. Use wool or string to tie the sticks together to make a tree shape and then stand it in the flower pot and use the stones to hold it upright - see picture.
2. Draw a sun on the card, colour it in and cut it out, then tape it to the top of the tree.
3. Copy the animal shapes onto card and add a few extra of your own design, and then colour them in. Cut out the animal shapes, make a hole in the top of each animal and hang them from the tree branches.
4. Extras - you could also draw 'African' designs on strips of paper and stick them onto the pot. Your tree could be used as a table decoration if you coloured the back of the animal and sun cut-outs.



PUZZLES

SPOT THE ANIMALS

The pictures below show parts of animals that appear in this magazine. Can you name them all?



3 Sea Life books to be won.



1.



2.



3.



4.



5.



6.

WHAT IS THE STORK SAYING?

Win a surprise gift.

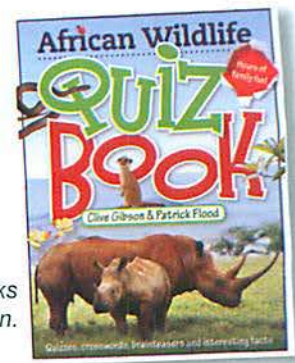
What in the world is the Saddle-billed stork saying to the buffalo as he enjoys his wallow?

Send your answer to *EnviroKids* together with a completed copy of the competition entry form.



Photo © B Kubical/Dreamstime.com

SAVANNAH WORD SEARCH



3 Quiz books
to be won.

T	S	E	E	B	E	D	L	I	W
R	E	K	A	N	S	D	U	N	G
P	H	R	O	E	S	U	N	R	S
S	W	I	M	W	I	N	D	E	W
S	L	V	N	I	G	G	E	K	I
E	G	E	N	O	T	B	Y	C	L
R	I	R	R	L	C	E	K	E	D
U	R	F	E	A	G	E	S	P	D
T	A	U	G	F	T	T	R	X	O
L	F	O	R	F	A	L	A	O	G
U	F	W	E	U	B	E	T	N	S
V	E	L	T	B	I	S	S	N	T

Find the words in the word search and watch out for the trick word – be sure to find the one with the correct number of letters! Some letters are used by several words, and words may go up and down or sideways, but they are always in a straight line. Colour in the blocks as you find the words. When you have finished, look for the unused blocks that spell out the name of an animal when read from the top down. This is something that you would not expect to find on the grassy plains of Africa.

Send *EnviroKids* the word together with a completed copy of the entry form.

ANT BAT BEES BUFFALO DUNG
DUNGBEETLE EGRET FROG GIRAFFE LION
OWL OXPECKER RHINOCEROS RIVER
SKY SNAKE STARS SUN SWIM TERMITES
VULTURES WILDDOGS WILDEBEEST WIND

WINNERS FROM ENVIROKIDS VOL. 33(3) OCEAN NURSERIES

Apologies for the late arrival of the *Ocean Nurseries* issue due to delays in the delivery and postal sectors.

OCEAN NURSERIES COLOUR-IN: The storybooks and choc bars were won by **Susan Titus** (6), **Mendoline Claassen** (8), **Leentjie Laminie** (12) and **Marley van Aswegen** (13) of Scheeperskraal Primary; **Jenna Kalis** (5) of Constantia Meadows; and **Kathleen-Sarah Hargreaves** (10) of Pennington.

NAME THE SEA CREATURES

The following have won the *Seashore Life* books – **Frances van Wyk** (12) of Hermanus; **Stuart Whitelaw** (7) of Claremont Cape Town; and **Amy Kalis** (7) of Constantia Meadows.

OCTOPUS SPOT-THE-DIFFERENCE

Jowellka Pietersen (7) of Kommandantsdrift Primary; **Danél Mulder** (10) of Hoekwil Primary; and **Ben Stevensine** (8) of Umbogintwini have won Surprise Hampers.

Competition Entry Form. Copy, fill it in and send to *EnviroKids*, P.O. Box 30145, Tokai, 7966.

Name ☎ (.....) Age

Postal Address:

Code: E-mail: Are you a WESSA member? YES NO

What are your 4 favourite pages in this issue? Page numbers

What would you like to read about in *EnviroKids*?

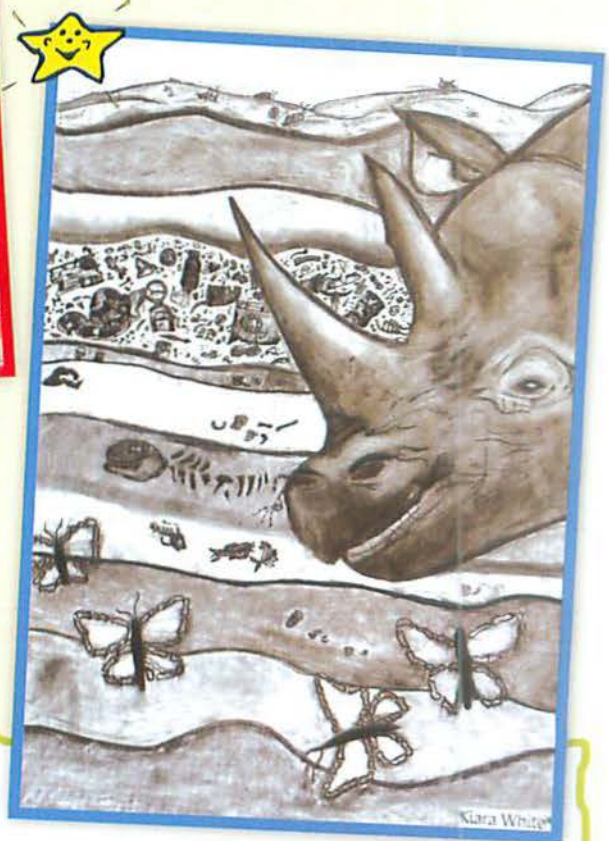
NOTE: Each entry must have a completed copy of the entry form attached. Providing an e-mail address helps us to inform you of the parcel tracking number if you are a winner. Send all entries in one envelope to save stamps and paper. Competitions are open to all children of 15 years and under.

Remember to attach your name, age, address, e-mail and phone number to each entry.

A star means that you have won a surprise gift!



A forest drawing by Maria Slater Gr 4 of Lebone II College, North West Province. The *Envirokids* Focus on Forests theme inspired the artwork.



Rhino by Kiara White (15) in Grade 9 at Lebone II College of the Royal Bafokeng in North West Province. The artwork was done for a project about environmental issues. Kiara wanted to show the plight of the rhino and the problem of waste management.



Dear EnviroKids

One day I saw a Hadeda in our garden. I noticed that it had a frog in its beak so I called my Mum and two sisters so that they could see it eating the frog. I thought that I would write and tell you about it.

From Cronje Fourie (9) of Secunda.

(Hi Cronje, this is certainly an interesting behaviour to see. The Hadeda ibis usually forages for insects and earthworms in grassy areas, but is also known to take snails and small reptiles, so why not a frog? However, the similar, but smaller Glossy ibis more commonly feeds in wetlands and takes water insects, shrimps and worms, and also frogs, fish and small mammals. What is interesting and very clever, is that the Glossy ibis often follows hippos and Nile crocodiles to feed on the insects that they disturb in the water! Check out the two species in a bird book – thanks for sharing, Roberta.)



Hadeda ibis.

Photo Charles Griffiths

Tiger face by Andrea Rouillard (13) of Linden.

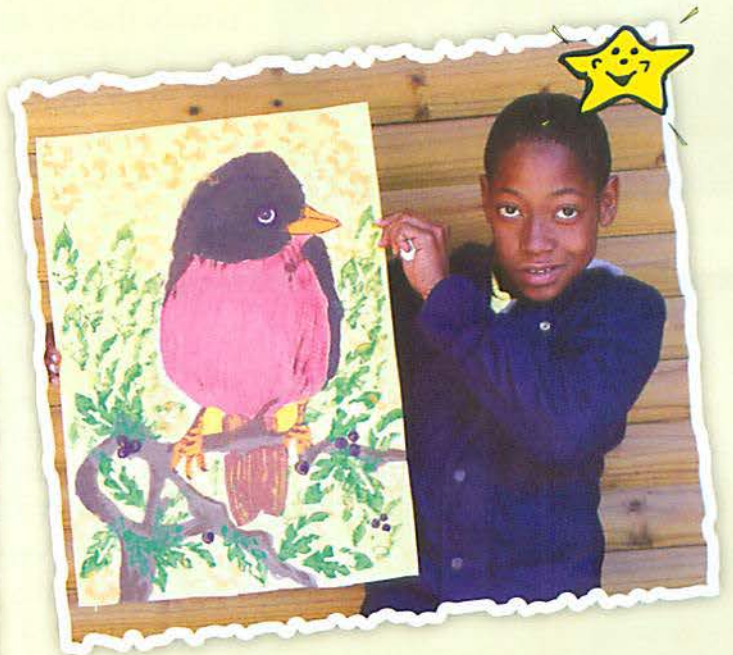


THE SUPERNATURAL

Why are there so few fairies? These supernatural beings exist in another dimension. They are more intelligent than humans because they give their entire life to preserving and protecting the world they live in. Fairies are joined with the things that they protect, so if what they are protecting dies, then they die with it. That is why there are barely any fairies left on Earth – because we are killing too many species.

From Andrea Rouillard (13) of Linden.

Hello – I am Nimrod Mohale. I am 12 and in Grade 7 at Laerskool Sonop. This is my artwork of a bird.



Rhino by Stephane-Etienne Kahamba (9) of Linden.



WIN A BOSTIK HAMPER WORTH R250.

Write to *EnviroKids* or send us your art and poems about nature. We love to hear from you and have 2 hampers up for grabs for the next issue due out at the end of February.

The hampers contain a togbag filled with *Bostik* products such as *Prestik*, *Clear glue*, a *Glue Stick*, *Super Clear Tape Value Pack*, *Rainbow Glitter* and *Neon Twisters*. These goodies are all useful for school projects and crafts. If you find yourself wondering what to do in the coming holidays, check out the *Bostik* website for some brilliant crafts and ideas for hand-made presents for family and friends, www.bostik.co.za

Don't just stick it. Bostik it!

JULIA'S BIRTHDAY RHINOS



Julia and friends with their rhino artwork.

Helping our rhinos from across the world

Faced with planning her eleventh birthday party, Julia Murray in Hong Kong decided to do her bit to help save Africa's rhinos. She arranged a birthday party and invited her friends to paint a rhino picture that could then be 'auctioned' online. The pictures were advertised through Facebook to raise money for 'Julia's Rhino Fund'.

Julia's mother contacted a friend and asked what would be a good charity to support. They decided to donate the money from the paintings to the Chipembere Rhino Foundation in the Eastern Cape. This charity allowed them to choose specific items on which the money would be spent. The Chipembere Rhino Foundation website has a special wish list, and leg collars for tracking rhinos were the most pressing need. It costs about R10 000 to dart and collar one rhino.

Working with her friends, Julia raised an incredible R30 000 for collars to help three rhinos. This is a massive achievement for an 11-year-old girl in Hong Kong – a country where people still believe rhino horn is a medicine.

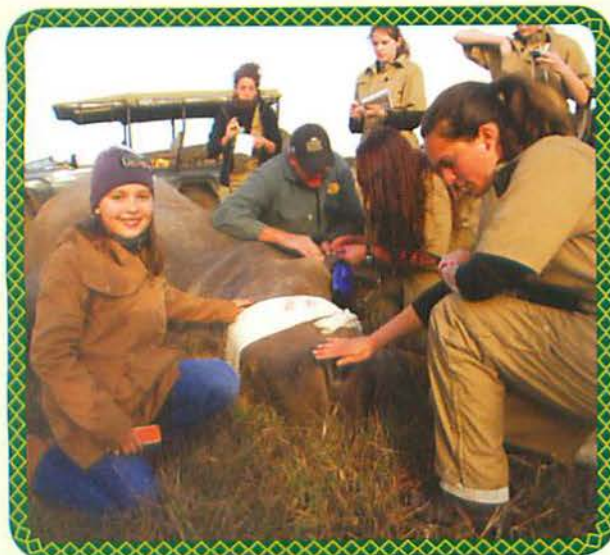
Julia's brother is at boarding school in the Eastern Cape, and the family had planned to visit him in July. This proved to be an ideal time for Julia to see how a tracking collar is fitted to a rhino's ankle. Collars help rangers to find and track rhinos in the bush. What made her trip really special was that wildlife vet, Dr Will Fowlds, agreed that Julia could help to fit her own collars on the rhinos. See the photos on this page. What an unforgettable birthday journey for Julia, and a lifeline for the rhinos!



Julia with Dr Fowlds at the helicopter.

Julia commented afterwards:

'Being up close to these huge animals was a humbling experience. And spending time with these amazing people who do so much to care for the animals really inspires me to continue raising awareness and money for rhinos. I hope we can make a difference, so that my children too, can experience these wonderful, almost prehistoric beasts.'



While Julia pets a 'sleeping' rhino, the team of student vets check on its health.



A leg collar fitted to a rhino's ankle.

HAPPY HOLIDAYS

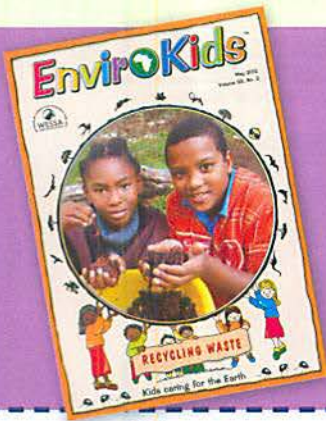
WISHING YOU ALL A WONDERFUL SUMMER HOLIDAY AND A FUN FESTIVE SEASON



Photo Dana Rothstein/Dreamstime.com

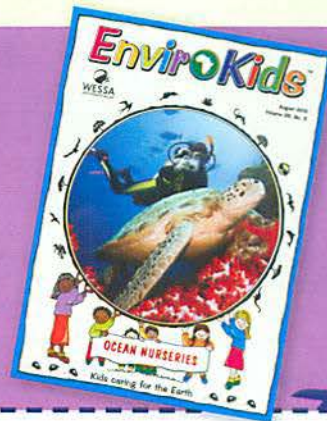
Grab a net and explore the world of insects and other mini-wildlife.

Don't forget to send us **YOUR** news!



COMING NEXT ISSUE: CONSERVING WATER

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WESSA

MEMBERSHIP FORM

PLEASE PRINT CLEARLY

New member's details:

Title: First name: Surname:

Address:

Postal Code: Telephone: (.....) Birth date:

Payee details:

Title: First name: Surname:

Address:

E-mail: Telephone: (.....) Amount enclosed **R**

Membership is R205 p.a. and R100 for each additional child at the same address – please attach names and birth dates.
Your membership fee supports WESSA's education and conservation projects that work towards conserving our natural heritage.
Make cheques payable to Wildlife & Environment Society of SA and post to WESSA Membership Services, Pvt Bag X007, Howick, 3290.
Enviro-clubs and Eco-Schools membership also available

FREE STATE ECO-SCHOOLS NEWS



Solar energy cookies

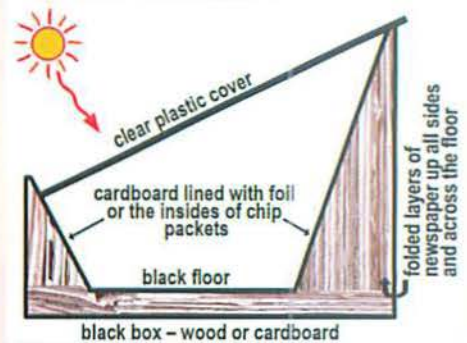
Teachers and learners in the Free State are attending courses sponsored by National Lotteries. They are learning about climate change and how to make and use sustainable technologies, such as solar ovens, to save energy and resources.

A solar oven can be used by all households trying to become more energy-efficient. A shiny surface reflects the sun's energy onto the black floor, while a transparent lid and insulating material on the walls and floor keep the heat inside. To cook the food the oven must always face the sun, so it should be checked and moved every 30 minutes to face in the right direction. It can reach a top temperature of 115°C. The solar oven works well but takes a bit longer to cook food than 'normal' methods. Visit the SunStove Organization website at www.sunstove.com/faqs/ for more information.



Cookies baking in a Sunstove 2000.

SIDE VIEW OF A SOLAR OVEN



Make your own solar oven from recycled materials.

Cut a cardboard or wooden box to make the frame and paint the outside black. The larger the box, the better the food will cook. Make sure the base is large enough to take a baking tray or pot. Place a thick layer of newspaper on the bottom and build several layers at an angle up the 4 inside walls. This insulation keeps the heat in. Place a piece of cardboard over the newspaper layers using a glue-gun or masking tape to hold it in place. Paint the floor black and

cover the angled side walls with tin foil, or the insides of foil chips packets. You will need a piece of clear Perspex or plastic for the cover, but could use clean tuna cans for the cookies and place them inside an oven roasting bag.



A home-made solar oven baking cookies using recycled tuna tins.



Learners testing the tasty solar-powered cookies!

Recipe for Sun-baked Cookies

- 1 ½ cups cake flour
- ½ tsp baking powder
- ½ tsp baking soda
- ½ tsp salt
- ½ cup soft butter/margarine
- ¼ cup brown sugar
- ¼ cup white sugar
- ¼ cup water
- ½ cup chocolate chips

By Delana Eksteen
Home-made sunstove
inspired by Iranda Kroon.

1. Mix the first 4 ingredients in a bowl.
2. In a separate bowl beat the butter and sugars together until smooth.
3. Stir in the flour mix and chocolate chips then add just enough water to make a dough.
4. Roll the dough into a log (about 25 x 7 cm) and wrap it in wax paper or a clean plastic bag.
5. Freeze dough for 2-3 hours and then cut into thin cookie slices (as thin as possible).
6. Place the cookies well apart on a greased black baking tray – they double their size!
7. Place the tray in a solar oven facing the sun. Use oven gloves to turn the baking pan around after 45 minutes as the heat might be unevenly dispersed in the oven. The cookies should be done after 1½ to 2 hours, but could take longer. Baking is best on a sunny hot day between 9 am to 3 pm. Mmmm... enjoy!

For more information about Free State Eco-Schools, contact Delana, Tel. (072) 468 8224, delana@wessa.co.za. Please join our Facebook page: Eco-schools Free State.