



Biological Research in Kuzikus

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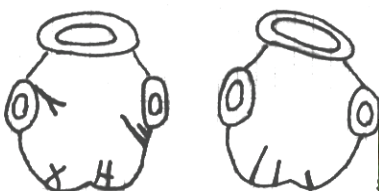
Walking in the footprints of Black Rhinos

Kuzikus is home to nine South Western Black Rhinoceros, a red-list endangered animal. After numbers declined to about 2,000 in 1993, the Namibian government implemented a conservation plan to help preserve this rhino. The population was split up between wildlife reserves deemed large and safe enough for them to live in. The Kuzikus population has thrived since, with several exciting new births. With the help of the San (Bushmen) tracking rhinos, Kuzikus monitors their welfare and prevents illegal poaching.

The tracking skills of the San are astounding, developing over many generations of people living closely with animals. It is hard to believe that western science could ever compare, but new technol-

ogy is now allowing BRink to track rhino too.

The BRink rhino tracking project conducted in October used analysis of footprints to track the animals. Computer programmes allowed us to use photographs to identify individual rhinos, using the patterns on their feet, similar to fingerprints.



Relief drawings of footprints from Columbus, the alpha male. Feet are hind left and hind right,

With the help of the San we tracked all nine of Kuzikus' rhinos, photographing their tracks. On seeing the animal we could then identify it, al-

lowing us to match each footprint to the rhino we were tracking.

The results were very exciting: we collected 231 footprints, of which 118 were marked as certain of the animal's ID. We hope to continue this in the future, as now we can identify rhino by footprint alone, we will be able to map their territories and where they move in the reserve, safely and without disturbing them.



Juno's forward ears signal she has spotted us

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The BRink of discovery

- ♦ 480 reptile species in southern Africa (pg.2)
- ♦ Black rhino pregnancy lasts 15months! (pg.2)
- ♦ Weighing over 10kg, monitor lizards can climb up trees! (pg.3)
- ♦ Caterpillar rain in Kuzikus (pg.1)
- ♦ Chameleons can be a different colour on each side! (pg.4)



A leafy feast above a BRink camp tent

Moth invasion strips trees bare

During the plant project there was an insane moth caterpillar invasion. When we hit *Acacia erioloba* trees with sticks it rained down

caterpillars! However, as soon as they were on the ground they raced back up the tree to find a new feeding spot.

Within three weeks some areas of Kuzikus had trees with no leaves left on them. After sufficient eating the caterpillars transformed into cocoons, hanging all over the trees, looking like Christmas decorations. The trees recovered fairly quickly with new leaves, since the cocoons and adult moth stages do not feed.

Although the trees recover quickly, the cocoons can be harmful to antelopes which sometimes feed on them. They do this only as a last resort, if there is a drought and no vegetation to eat. The moth is related to the silk moth, so the threads making up the cocoon can get tangled in the gut of antelope which can sometimes kill them. Luckily we had a very good rainy season in Kuzikus this year so the animals are able to feed on their preferred grasses and shrubs.

Join the reptile investigation!

With 6 spaces left, why don't you join our reptile project!! There are many interesting reptiles in Kuzikus, from blind legless skinks to huge monitor lizards, relatives of the powerful Komodo Dragon. This project aims to trap smaller lizards and learning handling techniques. We will also safely study snakes by attracting them to warm "false" habitats where we can view them from a distance.



A monitor hides up a tree, can you spot it?

An encounter with a monitor lizard we will never forget was with the dead monitor. At about one meter long we could not resist approaching this impressive beast who with a twisted leg and a dried out appearance, we were convinced must be dead. To scientifically confirm this we gave it a few experimental pokes with a stick before crouching down to study it. With that it made a terrifying grumbling noise and ran, ever so fast and thunderously... thankfully away from us! We later read that these lizards "play dead" then flee when threatened, and they rarely confront an attacker, phew!!

Despite their huge size, they are surprisingly fast and agile, and with powerful claws can even climb trees. Sadly the beautiful skins of these animals are prized for fashion and thousands are killed each year. They are protected throughout southern Africa, including Namibia and observing them and their behaviour in Kuzikus is an amazing privilege.

The Kalahari may be a desert but plants thrive

Having focussed a lot on animals in Kuzikus, BRinK turned its attention to plants. The importance of vegetation cannot be appreciated enough, providing habitats, food, shelter and all-important water for animals. The study focussed on grasses, Poaceae family, as they are hugely successful and crucial in many ecosystems.

We collected and identified 22 species of grasses from different habitats in Kuzikus, and found there



were differences between the grasses growing in the open grassland, bush, waterhole, and salt-pan. This allows us to map the parts of the reserve where the grasses grow.

Most species were perennials and belonged to the *Stipagrostis*, *Eragrostis* and *Aristida* genera. Grasses can be indicative of animal and land use and we could see which areas of Kuzikus were healthy and which were over-disturbed by grazing. This is of value for management of the reserve flora and fauna.

We pressed and filed all species in a herbarium, for reference with the aim of adding to over many years and seasons. This will be of tremendous value to future studies, when results will be integrated with data from other projects (mammals, birds, reptiles, and insects) for a fully comprehensive study into the biodiversity of Kuzikus Reserve.

BRiefly BRinK

News in brief from our camp

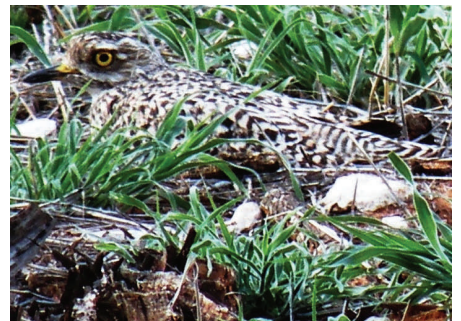
Share your tent...with a lizard!

"Lucas the Lizard", the faithful visitor! Kept us company, scurrying up tent walls, under tables and even visiting us in the shower! Lucas is a Kalahari Tree Skink, identified by scales on his feet. Catching him was not easy!



Thick-knees: follow diversion

A pair of thick-knees set up nest by the BRinK toilet. They are night active, making funny loud noises to keep us awake and greeting us by the kitchen in the morning. We felt privileged to have them nest in our camp, so to keep their trust we walked a detour to go to the toilet!



Rain on the Kalahari plains

February had unusually heavy rains, over 70mm nearly washed camp away! This is good news for BRinK projects as everything benefits when there is good rain. Animals are thriving, vegetation will persist and migratory lapwings make the most of flooded salt pans.



2010 International Year of biodiversity, how BRink participates

2010 has been declared the International Year of Biodiversity by the United Nations. A diverse ecosystem is invaluable, providing homes, food, fuel, medicine, cultural diversity and beauty to the world. This is the year to celebrate life and appreciate the value of biodiversity.

Over exploitation of the environment is reducing the resources of Earth so aims of The International Year of Biodiversity are reduce the rate of biodiversity loss and safeguard biodiversity for the future.

We are dependant on the 13 million species we share the Earth with and are part of a web of diversity that sustains us, even to the level of the air we breathe.

We need to stop biodiversity loss, and we need to act now.



Many BRink projects this year describe and study the diversity of animal groups and vegetation habitats in Kuzikus. This is our to one chance to find out about the Kalahari biodiversity.

In accordance with the 2010 International Year of Biodiversity, we will present the diversity of the Kalahari to locals and tourists on the reserve in our presentations. We look forward to meeting new people and introducing them to the biodiversity and beauty of Kuzikus.

Become a BRink volunteer! Be quick...limited spaces left this summer!

Reptile trapping and tracking

(Oct) 6 spaces. Apply by end July.



The camouflaged Namaqua chameleon basks on a rock

Find a chameleon!

All indicators of distribution, habitat and diet conclude that the Namaqua Chameleon will be in Kuzikus. But we have yet to see it! Join in our first reptile study and help seek out this fascinating and cryptic animal.

And here's an interesting fact: as well as using their colour-changing for camouflage, this chameleon warms itself by changing the side facing the sun dark to absorb heat, and the side facing away pale to minimise heat loss!

Birds and their calls

Where do birds live in Kuzikus? How do they communicate? Find out in July. 1 space left!! Apply by end May.

Entomology: insect collecting

Insects are diverse, colourful and often very odd! Learn about them in October. 4 spaces. Apply by end July.

For more details of each project, and what you will experience with BRink, just have a look at our website www.brink-namibia.com

Horny rhinos: BRink's hot new gossip!

Juno, the young female rhino has hooked up with Columbus the huge dominant rhino bull. Poor Juno has had some bad experiences of males in the past, having to jump into the waterholes to escape from the somewhat violent approaches to courtship of male rhinos. She has even suffered some severe injuries from their horns when she spurned them in the past.

However we are happy to report that new boyfriend Columbus treats her well! He protects her from other males and spends most of his time hanging out with her, having romantic dinners of *Acacia* tree.

However, being a polygamous species, his one flaw must be that he cheats on her. With his ex: Hera. We saw him! This is completely normal Rhino behaviour, only the strongest males father most calves and the females bring up the young alone.

Hopefully our next sighting won't be of a heartbroken young Juno, eating junk food *Acacia* berries alone, with lots of tears and Kleenex!

However, insiders suggest it may be it the other way round: Columbus cheating on Hera with a new younger girlfriend, Juno?! BRink private detectives will keep you up to date!



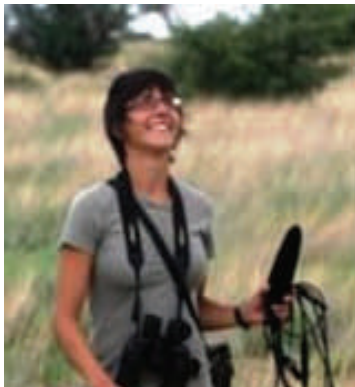
Some very good news is that we can expect yet another Rhino calf in Kuzikus in the next 2 years, Hera is expecting a sibling for Himba, Kuzikus' youngest rhino.

Meet the team: Whose project will you volunteer for?

Joana

I am a behavioural ecologist, originally from Portugal. I have vast experience of field work with many animal groups.

I will run the reptile and tracking projects, both new BRink studies!



The Reptile project is one of the most exciting as it is the very first time reptile diversity is studied in Kuzikus!

"simply painting stones black attracts reptiles"

You will set up pit fall traps to trap small lizards. Traps will be set up at different habitats, allowing you to consider differences in lizard diversity between habitats. You will also look into other reptile groups present in Kuzikus. By simply setting up metal sheets or painting a few stones black, you can easily attract reptiles looking for warmth. This allows you to build

the first reptile species list of Kuzikus!

The Tracking Skills study will allow you to play wildlife detective. You will be investigating signs left by animals: footprints, pellets and more discreet signs such as foraging evidence, fur, feathers and skins, owl pellets and bird faecal sacs. Together we look for evidence of animal activity, take samples back to camp to analyse and have a more careful look with a microscope. We will even imprint footprints with plaster of paris! This is a wicked project, as it does not only focus on one animal group, but several. It will give you a very good idea of the wildlife variety at Kuzikus!

Johanna

Hi there, I am very excited about this year's projects! In fact, I will be leading three of them, including one that was proposed by students of the University of Lausanne themselves.

This project will study diversity of small mammals in Kuzikus using live-capture techniques, sedating animals handle and identify. Having worked on snow voles in the past, I am excited to employ the methods on Kalahari Desert animals in Kuzikus. We will capture a range of small rodents, including dormice, voles and smaller rats.

I will also lead the large mammal abundance study. Last year we had some promising, important results with this study.



I am excited, because this time we will compare results with previous years to find out which antelopes were affected by the game catching in May, and which benefited from rain in February and March.

Finally, I will run a project in a field that personally fascinates me a lot: Entomology! Insects have followed me throughout my zoology career and I am happy to have a closer look at the diversity that occurs in Kuzikus. We will collect, mount and identify these creatures and collaborate with museums - there is a good chance for new discoveries!

Ali

Hello, I'll be leading the first project this summer: birds! Because it's the first there's some extra excitement: re-building the camp after the rainy season, making it homely again to live in. You'll love it if you volunteer here, the camp is perfect, comfy and so close to nature, we see all of the animals from our windows and while eating outside under the sky.



Groundscraper thrush with a clown-like face

So the bird project... This one is brilliant! The best part for me is the song recording. Walking through the Kalahari loaded up with microphone and parabolic dish is a bit of a sight. But the real excitement, and the challenge, comes as we try to stealthily stalk the birds to record them. Using only their song as a guide, we track down the singer to record it. Obviously many fly away, so it's a real under-cover mission!

Data collection is also fun, walking the transects we see all the animals and plants of Kuzikus, and learning distance sampling data analysis is a real skill for a future in ecology.

On this project in 2009, we saw a new bird every day, right up until the end. In fact, I still remember my last day's bird, a beautiful green Diderick Cuckoo! I hope we see many more this year, from tiny colourful songbirds to fearsome vultures.

