

# Magazine



Anti-Poaching Practical training

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Snare poaching: A valuable insight

The IAi-IAis/Richtersveld Transfrontier Park

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### WildlifeCampus How to track A dormouse



n a previous article (August 2020 Edition), I took the opportunity to explain how I ended up conducting research on the Woodland dormouse (*Graphiurus murinus*). The full title of the resultant mini dissertation was "The Habitat and Ecology of the Woodland dormouse in an Eastern Cape Forest Remnant", scintillating reading! Alas out of print ... (it was never published but was referenced).

I was working with another graduate student (he went on to earn a Ph.D.), and a key objective of the study was to conclusively prove where dormice nested during daylight hours.

Several approaches to this obscure task were attempted. The simplest was that once we had removed a dormouse from the Sherman Trap (see the aforementioned article on how this ethical system works), we released it at the exact spot at which it was trapped (at the foot of a tree) and tried to follow it when it moved. This brought up several immediate issues. They move damn fast, they always run up the nearest tree (conveniently located), they are exquisitely camouflaged in this habitat, and in the dim light of the heavy overare lost from sight within canopy milliseconds. Fitting a radio-tracking collar was both beyond the technology at the time and way outside the project budget which was nil.

(Not entirely nil, we were authorised to buy the peanut-butter and (generic) Jungle Oats which formed the bait for the traps.)

The solution was found in "powdering the rodents" (not a phrase you hear every day). The concept, which had been successfully used before with the Spectacled dormouse (*Graphiurus ocularis*), was to shower the newly released dormouse in a powder and follow the trail it would hopefully leave behind when it rapidly ran away. The previous study however was somewhat vague on what was used, so we needed to identify and source our own very specific power.

Most importantly, it had to be non-harmful to the dormice in every way. Not only non-toxic, but it could not impede its movement, not change its scent profile, not interfere with its ability to forage or frolic, it must be quickly lost for the animal and it must not make it any more visible or viable (or tastier) to potential predators. What we found was a powder that was completely benign and fluoresced in the dark, but only when wet and under UV light, a combination of factors that would never occur naturally.

Since dormice are nocturnal, traps are set at sunset and cleared at sunrise. When we cleared the traps in the morning, the oblivious star of our research was liberally sprinkled with the special powder and released at the base of a tree, (our traps were always set at the base of trees). The tree was marked (yellow ribbons) and we retuned that night well after full dark. One of us armed with a spray bottle of water, the other with a handheld UV torch.

We were particularly pleased to find that the residual trails were very obvious under these unique circumstances of damp and in the glow of ultraviolet light and easily followed. Followed that is, if the tree was at all climbable and the trails didn't run out when either washed away, or the dormice had jumped to adjacent branches or simply ceased as the powder was designed to fall off quickly. But, after several nights: success! A dormouse trial led us to its nest in a hole in the upper branches.

With the confirmation of an active nest, the location was thoroughly studied with motion sensors (activity) and temperature sensors (effective of the nest micro-climate).

The methodology and preliminary research produced was subsequently utilised for more in-depth research for several graduate students over several more years. Micro-fauna in habitats, while mostly unseen and underappreciated are no less important than anything else that makes up the ecosystem.

And that, is how you track a dormouse.

Todd

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"The only thing necessary for the triumph of evil is that good man do nothing" (Edmund Burke)

### BEAUTIFUL BOOMSLANG

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Drop for drop, the Boomslang (Dispholidus typus) has the most potent venom of any snake in Africa. The amount required to kill a human is so small that one could barely see it with the naked eye. Luckily, they are notably shy snakes and are quick to disappear up the closest tree when disturbed. Bites are extremely rare and usually occur when the snake is captured or accidentally stood on.



Widespread throughout Africa, Boomslang are active during the day and true to their name (which translates from Afrikaans to Tree Snake) they are largely found in trees and shrubs. However, they do occasionally descend to the ground to bask. These snakes have a short stubby head with enormous eyes, strongly keeled scales and when threatened, they may inflate the neck and most of the body in defence.



They are highly variable in colour - hatchlings and juveniles are grey with a fine stippling of blue and orange which is prominent when the snake is threatened and inflates its throat. The juveniles have massive emerald green eyes. At around 1m in length the colours of this snake begin to change to those of the adult phase. Males are usually bright green, sometimes with black between the scales, but in the Cape Provinces of South Africa they are usually black above with green, yellow or orange sides. Females are usually light-brown to grey-brown or reddish in colour. The females are often mistaken for Black Mambas and the green males for Green Mambas, but the head shape and size of the eye are good distinguishing features.



Boomslang are well documented raiding sociable Weaver nests and eating the hatchlings. Their diet also consists of lizards, frogs and chameleons.

Boomslang venom is haemotoxic and compromises the blood clotting mechanism, causing uncontrolled bleeding if not treated. It is back-fanged with short, fixed fangs far back in the mouth. It is often incorrectly said that it can bite only onto a small digit, like a finger. In fact, it can open its mouth very wide, and easily latch onto an arm or a leg.





The venom glands in these snakes are quite different from those of the cobras, mambas and adders and are called Duvernoy's glands. These snakes have little control over their venom glands and to envenomate their prey they need to do some chewing.

The more they chew and put pressure on the venom glands, the more venom they manage to inject.



Even though we describe the venom of this snake as potently haemotoxic, the picture is far more complex. In experiments, Boomslang venom has a strong blood clotting action with no apparent haemolysis. It appears that Boomslang venom coagulates the fibrin in the blood producing afibrinogenemia, and only then does bleeding occur all over the body.



Their venom glands are minute and whereas most cobras and mambas yield around 250 mg of venom, a Boomslang has less than 8 mg.

Because of this system of envenomation, snake handlers that are bitten and quickly get the offending snake off, rarely get envenomated but it is still extremely risky.



The South African Vaccine Producers manufacture a highly effective monovalent Boomslang antivenom that costs R6,800.00 per vial and two vials are usually required per treatment



### **Course** Spotlight Animal Tracks and Signs of Africa



Take an exciting virtual adventure with us, as we explore the Animal Tracks & Signs of Africa, written exclusively for WildlifeCampus by world renowned authors - Chris and Mathilde Stuart. Over 1800 pages, featuring hundreds of species; this course takes an indepth look at tracks, prints, spoor, trails, droppings, feeding signs, kill sites, mud wallowing, rubbing posts, tree scratchings, scent marking, holes, bark-stripping, shed hair, skin & feathers, nests in & out of trees, mammal & invertebrate shelters and skulls. This course will enhance your enjoyment and understanding of the wild, even when no animals are to be seen.

### The IAi-IAis/Richtersveld Transfrontier Park

#### **Derived from our Cultural Guiding - Northern Cape course**

The IAi-IAis/Richtersveld Transfrontier Park is first park in South Africa to incorporate traditional semi-nomadic pastoral utilisation as part of its concept of conservation.

The Nama still herd their goats and sheep in the park and migrate according to the summer and winter rainfalls. It is the only mountain desert Park in Southern Africa.

It is also home to about one-third of all known *mesembryanthemum* species and to several rare plants, which includes several species of quiver tree and the halfmens ('half-human') or elephant's trunk. Richtersveld canoe trail is reckoned to be among South Africa's 25 best hikes.

In August 1991, in consultation with the local community, the northern portion of the Richtersveld was declared a national park. The park is owned by the Richtersveld communities and managed jointly by South African National Parks (SANParks). The approach seeks to incorporate the scientific expertise of SANParks, as well as the community's local indigenous skills to preserve the



local culture and traditional lifestyle. It was named a UNESCO World Heritage Site in 2007.

#### Why fences in the Park?

A number of different scientific equipment and facilities such as weather stations are visible in the park. The visitor will also see simple fences. Certain areas are fenced in for research purposes and closed for grazing (to more accurately measure the influence of grazing pressure on the vegetation). Other scientific research includes the migratory routes of herds and grazing habits of animals, as well as the changes in the vegetation with respect to climatic influences.

#### **Rivers, mountains, and climate**

Two main rivers flow through the park. The Gariep (Gariep or Orange) on the border with Namibia and The Fish River (Namibian side).

The parks highest point (1652m) is in the Huns mountains on the Namibian side. Vandersterre mountain (1337m) is the highest point on the South African side.

The park is arid with an average of 82 mm annual rain. The eastern part is subjected to extremely high temperatures with occasional summer rains. In the west, fogs, sandstorms, and light winter rains occur.

"Malmokkie" is the local term for the western fogs from the cold Atlantic that also bring muchneeded moisture for plant growth. Summer temperatures of above 50°C and freezing winter nights can occur.

## The IAi-IAis/Richtersveld Transfrontier Park

**Derived from our Cultural Guiding - Northern Cape course** 

#### <u>Flora</u>

Very sparse vegetation including mostly scrub veld, many succulents, hardy herbs and the 'eight-day grass' that germinates, grows, and produces seed within little more than a week after the rain.

#### Halfmens (Pachypodium namaquanum)

Also known as lady's leg and an elephant trunk. The halfmens succulents are known to shed their leaves to survive years of drought. The stem tops are inclined to the north, resembling that of humans staring northwards to the plains of Namibia. According to Nama legend, they were driven southwards across the Orange (Gariep) River into the Richtersveld and some of them looked back to where they came from and were immediately turned into trees similar to the Bible story of Lot's wife turning into a pillar of salt.

#### **Quiver Trees**

These are aloes and can live up to 400 years. Three varieties occur in the park:

- Aloe dichotoma
- Aloe pillansii (basterkokerboom)
- Aloe ramosissima (nooienskokerboom)

#### Shepard's Tree (Boscia albitrunca)

The stem of the tree is twisted and whitish in colour with a compact rounded crown. Although it can grow up to 7m, it is much smaller in the rocky and extremely dry conditions of the region with more fascinating shapes.

#### Botterboom (Tylecodon paniculatus)

A dwarf, succulent tree and can grow up to 2m tall.

#### **Fauna**

#### Insects

The Richtersveld hosts some of the most unique South African butterflies such as the Namaqua Arrowhead and Warrior Silverspotted Copper.

**Silverfish or fish moths** found in houses are considered to be a pest as they are not indigenous to Southern Africa. However, the indigenous fish moth seldom enters houses and the Namaqualand-Namib area is home to the largest diversity of silverfish in the world.





Derived from our Cultural Guiding - Northern Cape course

#### **Spiders and Scorpions**

Well adapted to survive in the desert. Most live in burrows (trapdoor spiders and buckspoor spiders). The button spider, in turn, spins its web in bushes. The park has four endemic sun spiders (roman spiders)

#### All three of South Africa's scorpion families occur in the park:

Buthidae (thick-tailed) – the more venomous Parabuthus genus is the largest of the scorpions found in the country.
Scorpionidae (ground scorpions)
Ischnuridae (rock scorpions)

#### **Reptiles and amphibians**

Many lizards occur here, of which nearly half of these are geckos. Taken its size, the area has one of the richest gecko faunas in the world. There are only eight species of frogs due to extremely dry conditions. The paradise frog (*Bufo robinsoni*) has mastered survival in the desert. Snakes are rare in the park – only a number of small adders and snakes. Tortoises are few but more common to the sandy flats in the west.

#### Birds

Bird watching in the IAi-IAis/Richtersveld Transfrontier Park is excellent and it is a prime venue for bushveld birding with some 350 bird species being recorded, including migrants and permanent inhabitants. The large variety in this arid region can be contributed to the presence of the Orange River and Orange River Wetlands, as well as the region's close proximity to the sea. There are a large number of raptors.



#### Mammals

The larger mammals are mostly on the Namibian side including Gemsbok, Kudu, and the rare Hartmann's Mountain Zebra. Common species include Steenbok, grey rhebuck, klipspringer, black-backed jackal. Interesting species such as porcupine, zorilla (striped polecat), aardwolf, brown hyena, caracal, and leopard are nocturnal.



#### |Ai-|Ais/Richtersveld Transfrontier Park

Northern Cape (SA)

Established: Nearest city: Area: Governing body: Orientation:

2005
Rosh Pinah (Nam) Alexander Bay (SA)
6,045 km2
Ministry of Environment and Tourism
(Nam) + South African National Parks
Karas Region (Nam)



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## Snares and Snare poaching

What is a snare? A snare is a trap which usually forms a loop or a noose. These traps are used to capture a wide variety of animals, from birds and small mammals to large cats and even rhino.

Animals are usually caught around the neck or limbs, resulting in a slow, painful death from blood loss, starvation, or strangulation. Snares can be made from simple wire, tension cable, bicycle brake cable, nylon rope and even woven plastic bags. These traps are therefore extremely cheap to make and easily accessible. Snare poachers often have an intimate practical knowledge of animal behaviour and movement and are therefore able to anticipate animal movement through the environment.

#### **Placement of snares**

Snares are often placed along well-used animal paths in areas of thick vegetation. Areas in which animals are forced to use a specific path are referred to as chokepoints. These chokepoints can be referred to as either "natural" or "forced".

Natural chokepoints are areas where animals are obliged to use specific paths because of natural barriers, whereas forced chokepoints occur when poachers actively block all possible paths except for one, on which snares are then placed.

Paths to and from permanent water sources are particularly susceptible to snare poaching, especially during the dry winter months when water sources are limited.





Snares have also been found attached to sturdy tree trunks under which, good quality graze is available, therefore, capturing animals that come to feed beneath these trees.

Alternatively, depending on the resources available to the poachers, instead of blocking secondary paths, multiple snares will be placed along all paths, both primary and secondary, to increase the chance of success.

Snares are widely used throughout Asia and Africa by both subsistence and commercial poachers. Snares are not selective and therefore, certain animal species such as predators (although not commonly targeted) are often unintentionally captured.

Antelope and other smaller species are most often targeted for their value as bushmeat, whereas predators (if targeted) are mainly targeted to reduce the risk of predator caused livestock loss.



No animal is exempt from the risk of snare poaching, with cases of rhino and elephant succumbing to snares being reported in parts of southern Africa.

#### Can I get involved in locating and removing snares?

#### Absolutely!

Organisations such as KaiNav Conservation offer snare collection activities in and around the Gauteng area. Volunteers can join these walks over weekends and contribute towards keeping our precious reserves clean and snare free.

More info?

www.kainavconservation.org

#### S.N.A.R.E

The S.N.A.R.E (Snare Neutralisation, Awareness and Removal Effort) initiative is a research and awareness project. The initiative focuses on the location and removal of snares and other equipment used to illegally harvest wildlife and flora from natural areas of South Africa.

#### **SNARE Art**



Since the implementation of the S.NA.R.E Initiative in January 2015, the KaiNav S.N.A.R.E team has removed countless snares and traps from the South African bush! These snares and traps are used in educational programmes, as well as in the S.N.A.R.E Art Programme to create inspirational pieces of art.

This programme aims to uplift local artists by assisting them in building a sustainable business. Each SNARE Art piece protects African wildlife while empowering underprivileged entrepreneurs.

## Wildebeest

### an animal designed by a committee



By David Batzofin

"Don't judge a book by its cover", was an adage that had been drummed into me as a youngster.

However, during my years of spending time in the bush, I had come to be somewhat judgemental of this particular species. Wildebeest give the impression that they have been assembled by a committee. Think about it, they have the horns of a buffalo, the stripes of a zebra, the slope of a hyena, the tail of a horse, and the brain of a guinea fowl.

However, all that was about to change with a herd that I had regularly spent time with for almost 40 years.

It started out innocently enough with a walk on a property that I have called home since 1977. As there was only plains game, guests were allowed to roam freely, interacting with giraffe, zebra, and this herd of wildebeest. I had decided that I needed images of the wildebeest for upcoming articles that I was doing research for and I walked off in search of the herd.

Now you, dear reader, have to understand that wildebeest are not known for their intelligence or so I had been led to believe. It, therefore, came as a shock that in this particular instance I had totally underestimated them and the manoeuvre that they were about to employ to get me out into the open and in a position where they could inflict harm should they wish to do so.

Walking towards where the herd was grazing out in the open, I did notice that the herd seemed to have split into two, with a few animals to my right and left, while the main portion, together with the herd bull was ahead of me in the distance. Although the animals on either side of me seemed to pose no threat, the herd bull and I, for some reason had never seen eye to eye and I was always cautious and respectful when I was in his presence. However, in this particular instance, he seemed to be far away enough so as not to pose a threat. But it turns out that not only had I misjudged the distance, but I had also misjudged his intent and the relevance of the animals that were following on either side of me.

I was so busy taking pictures that when I next looked up, the main herd was much closer than I felt comfortable with and the animals on either side of me had begun starting to move towards me. I am uncertain if I had a 'lightbulb' moment where I realised that I had been manipulated, but there was a moment when I realised that most of my escape routes had effectively been blocked by the herd. If you go into the bush often enough it will be drummed into you "DO NOT RUN, NO MATTER WHAT HAPPENS". Now that is certainly true for the predator species, run and you are considered prey. For the large dangerous game, like elephants, rhino, and hippo, they can all outrun a human so it is best to either stand still and scream or head for the closest tree.

But Wildebeest? I would not have given them a second thought. Seeing that they are a prey species, I figured that they would turn tail if I made myself big and noisy, so that is what I did. I stood my ground, waved my arms, and shouted. Then realising that this was not going to work, I hitched up my shorts and with all my bushcraft heading out of the window, I took off toward the closest place of safety that I knew, a space that was about 500m from where I started running.

## Wildebeest

By David Batzofin

### an animal designed by a committee



I did not look back, I did not take my eyes off my end goal. I made it to safety and it was at that point that winded and wobbly, I turned to see where my assailants were...and they were nowhere to be seen.

I like to believe the sight of an older guest in full flight gave them some sense of achievement and I want to know how I featured in their version of the story. To add insult to injury, the owner of the property had been watching and when the dust had settled and I had stopped shaking he showed me just how friendly the herd was towards him.

Lesson learned, respect given. I will never underestimate a wild animal ever again, no matter how incapable they seem of inflicting serious injury.

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