

# NEWSLETTER APRIL

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Dear clients,

We hope you are well, it seems that tourism is starting slowly but surely again. Hopefully Europe and the USA will soon make it easier to travel, and then it will be booming business in Namibia again! In this April edition you can read why warthogs have warts, and we tell you about our PM and Animal crime scene courses that we recently did. A word of caution, we see lots of snake bites at the moment in the clinic. In this edition we give some more info on snake bites and the snake's venom.

Kind regards, the Wildlife Vets Namibia team

## WARTY WARTHOGS

The warthog, an animal we often see in the Namibian fields and along the road. Not particularly the prettiest animal around... They are even listed on the 'Ugly Five', together with the vulture, wildebeest, Marabou stork and the hyena. A large flat head, tusks, mostly bald with some patches with stocky hairs and... a head full of warts! In people, a wart is a small noncancerous growth that can appear anywhere on the body, and is caused by a Human Papillomavirus Virus (HPV). It is usually unwanted and people generally rush to the doctor or dermatologist to have them removed. But in warthogs, the warts are quite important, and... the bigger, the better!

The warts, that have given the warthogs their name, are not caused by a virus or anything, but are thick growths of the skin. Basically, they are protective bumps, somewhat like the protective padding American football players wear. These 'warts' protect the warthogs face and eyes from pointy tusks during fights. This is the reason male warthogs have bigger warts, as they fight more. During mating time, boars ram their heads together and try to push the other one down.

Just by looking at the warts you can tell the sex; males have four warts, two large ones beneath the eyes, and two smaller ones above the mouth. Females only have two small ones below their eyes.



A boar (left) and young female (right) playing © M. Bijsterbosch



Common warthog male (above) © [Frans Lanting](#) and female (below) © [Africa Geographic](#)

## **SNAKE BITES**

Although we focus on wildlife and Ulf no longer owns Rhino Park Veterinary Clinic, we are still closely linked to this place. From here it is that we want to give you a word of caution. The last few weeks we have seen a lot of snake bites in the clinic. Mostly dogs are bitten, and often it is from a puff adder. Despite the fact that less than 10% of the southern African snakes are dangerously venomous, the reality of a snake bite must not be underestimated.

Usually when the weather is getting warmer, and rains are coming, snake activity increases. At the moment we see a lot of snake bites, this is possible due to the fact that it is getting colder; snakes are more on the hunt to increase their weight before winter really starts.

### **When your pet is bitten by a venomous snake, go to the nearest veterinary practise immediately!**

Different snakes have different types of venom, and will need a particular treatment. It can happen that the snake bites, but does not inject venom (dry bite). If you see swelling, bleedings, the animal has severe pain and/or does not feel well, do not take a chance and bring it to the nearest vet ASAP. Try to take a photo of the snake so it can be determined what snake it is. There are many 'boere raad' out there, but if your animal is showing serious signs, the only thing that will save your animal is proper medical treatment. In case of a serious bite, even with proper medical treatment the chances are that the animal does not make it.

#### **Cytotoxic venom- affects tissue and muscle cells**

Examples of snakes that produce a cytotoxic venom are the adders and Mozambique spitting cobra and stiletto snake. Their venom has a high amount of cytotoxins, which are toxic to the cells in a body. This leads to (severe) pain, swelling, blistering and can lead to tissue damage. Most of the times dogs are bitten around the neck or in the face, the swelling can then lead to difficult breathing. The animal can die because it cannot get enough oxygen (when the airway gets obstructed for example), shock and/or tissue necrosis (tissue dying off).

Bring the animal to the vet. The only remedy is to give the animal supportive treatment and in severe cases antivenom. When an animal has difficulties with breathing, it may need additional oxygen. Give hot and cold compresses to keep the swelling down.

#### **Neurotoxic venom- affects the nervous system**

Examples of snakes with this type of venom are the black mamba and some non-spitting cobras. Neurotoxic venom attacks and disrupts the neural pathways and nerve tissues. This venom works very fast, the animal might start vomiting, gets blurred vision and has difficulty in swallowing. The respiratory muscles will become affected, and the animal will go into respiratory failure.

As this venom works fast, do not waste time and go to your vet. The animal needs lots of antivenom, and might be placed on a ventilator. Additional supportive treatment is given. If your animal stops breathing while you are on our way to the vet, give mouth-to-nose resuscitation, but unfortunately there is not much more you can do. Animals surviving a serious bite is rare, but not entirely impossible.



*Labrador bitten by a puff adder © [P. van Heerden](#)*



*This jack Russel was bitten by a black mamba, but survived © [Dr Jo-Anne Gibb](#)*

### Haemotoxin venom – affects blood and tissue

Example of a snake with this type of venom is the boomslang. Haemotoxic venom affects the red blood cells, and keeps the blood from clotting. Blood vessels are destroyed and eventually lead to internal bleeding. Just after the bite there is usually little swelling and little pain, then animals might start sweating, vomiting and feel sick. After a few hours the bite site will start bleeding, and the animal starts bleeding from the mucous membranes (nose, mouth). In the next few days internal bleedings will cause the animal to vomit blood, and kidney failure and bleeding in the brain might lead to the animal dying.

The only remedy is to give the animal supportive treatment and in severe cases special Boomslang antivenom, however we are not aware of anybody keeping this in Namibia, this must be flown in from South-Africa.



Jack Russel being bitten by a boomslang © [T. Dickerson](#)

### Antivenom

In serious cases your animal will require antivenom, and will not survive without it. Antivenom is produced in South-Africa, and the polyvalent antivenom contains antibodies (protective protein produced by the immune system) against cytotoxic venoms from (species that occur in Namibia are listed in green): **Black mamba – Swart mamba (*Dendroaspis polylepis*)**; Green mamba – Groen mamba (*Dendroaspis angusticeps*); Jameson's mamba (*Dendroaspis jamesoni*); **Cape cobra – Geelslang (*Naja nivea*)**; Snouted cobra or Egyptian cobra - Wipneuskobra (*Naja annulifera*); Forest cobra - Boskobra (*Naja melanoleuca*); Gaboon adder - Gaboenadder (*Bitis gabonica*); **Mozambique spitting cobra - Mosambiekse spoegkobra (*Naja mossambica*)**; **Puff adder - Pofadder (*Bitis arietans*)**; Rinkhals (*Hemachatus haemachatus*). The monovalent antivenom is only effective for venom of the boomslang.

In South-Africa, the antivenom is made from horse blood. A horse gets injected with small amounts of venom over a period of time. Its immune system will start producing antibodies, and eventually becomes immune for the venom. Once the horse is immune, blood is collected, and the plasma of the blood (the yellowish liquid part) is used to produce the antivenom. When the antivenom is injected in a patient that was bitten, the antivenom binds to the venom components that float around in the animal's blood circulation, and neutralizes it.

In case that the animal is seriously bitten, a vet will decide to slowly administer 1 or more vials of antivenom. Unfortunately, this is an expensive treatment and the outcome remains unsure. The snake's venom can seriously damage the kidneys, and even if the animal seems better initially after the antivenom, after 3- or 4-days kidney failure might still result in the animal dying. We cannot say on forehand whether this will happen or not.

Snake antivenom must be kept cool (between 2-10°C), and loses potency over time. Mind the expiry date, rather do not use it when its expired, unless in consultation with a veterinarian.

### Venom in the eyes

When your animal gets spat in the eye by a spitting snake (e.g. zebra snake), immediately wash the eyes under a tap or with a hose. Rinse the eyes for 15-20 minutes at least. Take the animal to the vet, where it will receive eye drops that help with the pain and antibiotic cream that will prevent infections. The animal's eyes should be fine after a few days.



Dog that was spat in the eyes  
© [L. van Rooyen](#)

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A useful Facebook page with lots of information is [Snakes of Namibia](#), here you can also upload photos from snakes if you are unsure what type of snake you have found.

## POST-MORTEM AND ANIMAL CRIME SCENE COURSE

Early April we presented two courses at Kifaru Bush Camp near Outjo. Firstly, we presented the [Post-Mortem \(PM\) course](#). As Namibia is such a vast country, it is often difficult and expensive to get a vet out once an animal (either game or livestock) has died. When the cause of death is not examined, lots of information gets lost; why did the animal die? Is there an infectious cause that could affect other herd members or even people? What can you do to prevent more mortalities? We had a nice group of participants, and we taught them how to do a systematic and thorough PM by themselves.

It was quite an intensive 2.5 days, with lectures on a variety of topics; we explain when one should not do a PM, how to dispose the carcass, where are the organs located and what is their function, what changes in the body after an animal has died (so how can you differentiate between 'the normal' and 'abnormal'?). We did a lecture on photography, and practised taking close-up photos. We place quite some emphasis on photography, after all, your photos will be the veterinarian's eyes! We also discuss what you should have in your PM kit, which samples to take (and how), and we have a big lecture which shows you all kinds of lesions of organs that you might encounter. We described the PM procedure, and then it was time to practise on a big warthog boar!

Our whole idea with this course is that you are able to perform a PM yourself (and know when NOT to do it yourself!), take proper photos and samples, and sent this to your veterinarian. Your veterinarian can then examine your findings, look at certain samples under the microscope, and possibly some samples are checked by the lab. Then the vet can interpret your, his, and the lab's findings, discuss the results with you, and when needed, you are able to improve your herd/disease management. This will be a win-win situation for you, but also for our general knowledge on disease situations in Namibia.



*Besides some intensive lecturing, there was also time to practise! We had a big warthog boar on where we did a PM. When you have a closer look at the last photo, you can see a liver. But this does not look very healthy... is this now a PM change, or did the warthog have liver issues? In this case, it was a PM change, since the liver is one of the first organs to rot. Bacteria accumulate after an animal has died, and produces gas bubbles. This liver is now pretty useless to take samples from, as the rotting process has gone too far already. As the liver is an important organ, we can get lots of information from it. This is one of the main reasons why it is super important to perform a PM ASAP! The fresher the carcass, the more likely you and the veterinarian are able to figure out why an animal has died.*

Straight after the PM course, we presented the [Animal Crime Scene and Evidence Handling course](#) for the 4<sup>th</sup> time already this year. If you have read our newsletters before, you probably know by now what this course is all about 😊 For those that missed it, here a quick recap!

We all know that stock theft and poaching are major issues in Namibia, very recently it was all over the news again how farmers suffer from these losses. Poaching/stock theft are crimes, and as with all crimes, it is important that the correct investigative steps are taken. It happens all too often that the police are unable to come out or come late. As these crimes are outdoor crimes, it is actually important to secure and handle the scene ASAP, before footprints are blown away, or small 'doppies' are covered by sand. Another issue that people do not always take the correct steps when it comes to handling a crime scene, and the collection of evidence. They find a bullet, pick it up and put it in their pocket and just like that... Their DNA is all over the evidence.

Poor investigation of crime scenes, and the incorrect handling of the crime scene and its evidence are important factors for the poor arrest- and conviction rates in Namibia. In this course we focus on taking the right steps when approaching and handling a crime scene. We were very pleased that Mr Harmse from NAMPOL was able to attend the course. The better the cooperation between first responders (e.g. farmers, APU, vets) and the police, the better our chances of getting the culprits! We hope to further strengthen our relation with NAMPOL during future courses.



*During the course we try to show you the complexity of investigating a crime scene and we explain what DNA is (and how it can help to get the culprit, but also how easy it is to accidentally leave your own DNA behind – making it look like you are the suspect!). Photography is an important part of the course, we have two lectures about it, and we practised taking proper photos of evidence and the crime scene. We lecture about crime scenes and evidence (what types are there, how to handle them) and we practise this in the field. We have a lecture on court appearance and body language, and the forensic PM. On the final day everything comes together, and the participants have to handle a staged crime scene – from securing it, to handing evidence over to the police.*

A big big thanks to all the participants for joining the course! We had a great week, and we hope everybody enjoyed it and learned a lot. A special thanks as well to the Kifaru team for accommodating us and providing us with all the amazing food! At the moment we don't have more courses planned, but we are sure we will still do some more this year! If you are interested in one of them (or both, even better!), sent us a

WhatsApp, or email [mariska@wildlifelivetsnamibia.com](mailto:mariska@wildlifelivetsnamibia.com).



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