





NEWSLETTER APRIL

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Dear clients,

We hope you had a lovely Easter weekend! In this newsletter we have a closer look at the waterbuck's bum, and we inform you about an interesting case we had a few months ago, where we examined and treated an eland heifer with bottle jaw.

11-12 May we offer a Post-Mortem course, and 13-15 May an Animal Crime Scene and Evidence Handling course at Kifaru Bush Camp. We still have space, so we hope to see you there 😊

Kind regards, the Wildlife Vets Namibia team

THE WATERBUCK'S BUM

The waterbuck is a beautiful large antelope with a funny bum. The scientific name of the waterbuck is *Kobus ellipsiprymnus*, where the word 'ellipsiprymnus' refers to the white, elliptical ring on the rump. This comes from the Greek *ellipes* – ellipse, and *prymnos/prumnos* - hind part. There are 37 (!) subspecies of waterbuck, divided into two groups: the common (or ellipsen) waterbuck, and the Defassa waterbuck.

Did you ever wonder what the white ring is about? Well, scientists also asked that question, and they are still not sure what the exact purpose of the white ring is. The most accepted theory is that the circle is a kind of following mechanism. The circle is well visible for other herd members and easy to follow when running through the grass.

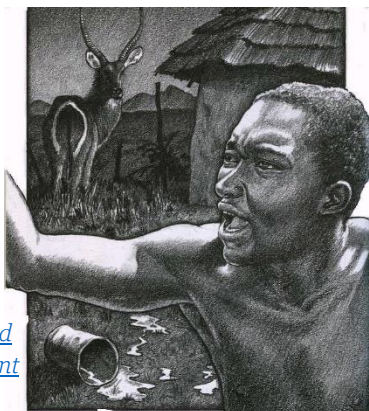
Others say the white is a type of disruptive camouflage. Many species use spots, stripes or other patterns on the coat to 'break up' their body outline. These patterns form false edges which disguises the shape of the body.

Because most mammals only have black-and-white vision, they rely on movement and shape. When the shape is broken up, this can be an effective tactic. Check our [August 2020 newsletter](#) for more information on animals and their camouflage tactics.

Or perhaps the tribesman of Kenya/Tanzania have the right answer...



The common waterbuck has a white ring around the bum, while the Defassa waterbuck has a plain white backside. © M. Bijsterbosch – photos taken in Namibia and Tanzania

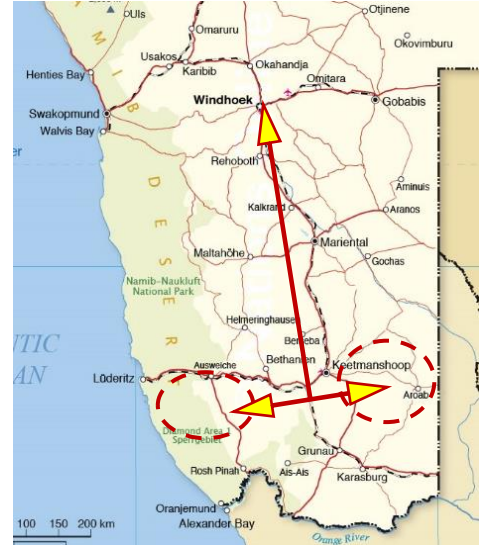


“On a dark night a waterbuck cow and her calf grazed close by a tribesman’s hut. The tribesman was busy that day with whitewashing the walls of his hut, and left the pot outside. The waterbuck cow grazed closer and closer to the hut, and the calf followed. Since it was so dark, the calf accidentally knocked over the pot, awakening the tribesman. He ran outside, and saw his pot being spilled over. He chased the waterbucks, and threw the pot to them. The empty pot struck the waterbuck cow, and left a large round white mark on her bum. Rather than being upset, the waterbuck cow was actually pleased, as the white marking showed up nicely in the dark, allowing her calf to follow. When the other waterbucks saw this, they thought it was a great idea, and since that day no self-respecting waterbuck has been without a mark.”



STOP! Before you read on...

We will be visiting several farms in the South of Namibia in June. If you want to join in on this trip and share kilometer costs, please let us know. The more farmers join in, the cheaper it will be for all 😊



COURSES

In May we offer two courses at Kifaru Bush Camp (Outjo district). Feel free to contact us for more information.

KIFARU BUSH CAMP
11-12 MAY 2022

POST-MORTEM COURSE

Contact us for more information:
mariska@wildlifevetsnamibia.com

KIFARU BUSH CAMP
13-15 MAY 2022

ANIMAL CRIME SCENE AND EVIDENCE HANDLING COURSE

Contact us for more information:
mariska@wildlifevetsnamibia.com

ELAND WITH A BOTTLE JAW

At the end of last year we were called out for an eland heifer in poor condition, with a big swelling under her jaw. The swelling under the jaw is what we call a 'bottle jaw'. Bottle jaw is a term used to describe an area of oedema (swelling caused by the accumulation of fluid) under the chin.

Before we explain more about the causes of bottle jaw, let's go back to school... Do you remember the term *osmosis* from your biology classes? A quick recap: osmosis is the movement of fluid from an area of a high concentration, via a semi-permeable membrane, to an area of a lower concentration. This movement makes sure there is an equal pressure on both sides of the membrane.

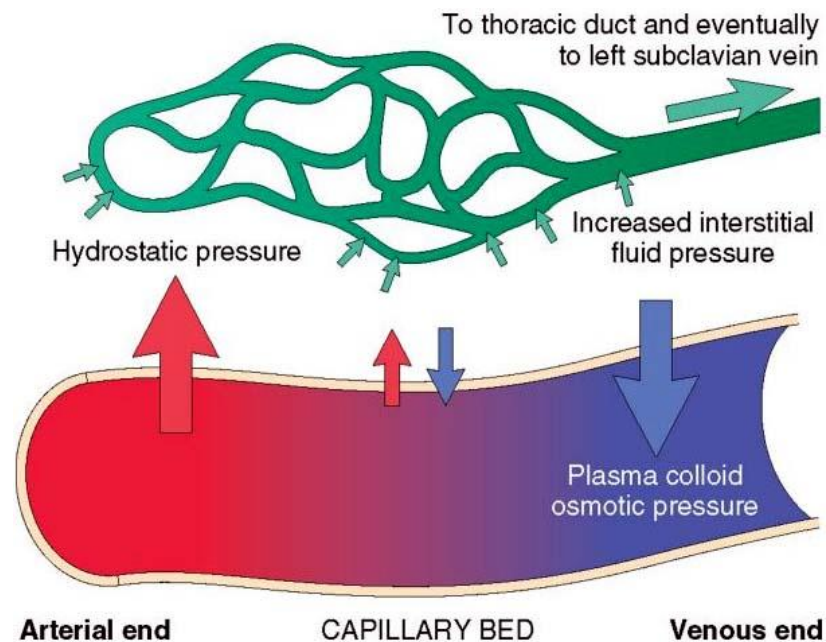
In the blood you have a number of plasma proteins, and about 50% of these proteins are *albumin*. Albumin plays an important role to maintain the osmotic balance between the blood and tissue fluid. Normally, fluids leaving the blood- and lymph vessels get pulled back into the vessels by the albumin. Occasionally it happens that this fluid exchange mechanism does not function well, resulting in excessive fluid accumulation in tissues outside the blood/lymphatic vessels < the so-called oedema formation.

There are a couple of reasons for excessive oedema formation:

- 1) Insufficient albumin in the blood – this can be caused by albumin loss (kidney diseases, or blood-sucking worms or the liver not producing albumin.
- 2) Too high blood pressure, then the fluids are literally squeezed out – commonly seen in people with heart failure that have swollen legs.
- 3) A disease that damages the blood vessels, causing fluids (usually whole blood) to leak out. Examples are African swine fever and BMCF (snotsiekte), but it can also happen with a snake bite.
- 4) Local obstruction in the blood/lymph drainage, due to e.g., an abscess or a tumour.



Eland heifer
with bottle jaw
© I. White



This schematic drawing gives an overview of the factors influencing fluid movement across blood vessels (in this case capillaries, the smallest blood vessels). The 'blue' part of the vessel is the venous end, here is where the fluids are pulled in. The 'red' part of the vessel, the arterial end, pushes fluids out.

Normally, due to osmosis, the fluids inside and outside the vessels are balanced. If there are problems (see numeration on the left), this balance can be disturbed, leading to fluids leaking out of the vessel. This leads to oedema. Lymph veins (the green ones) will try and drain the excess fluid back, but if the capacity of these lymph veins is exceeded, the oedema remains. © [Medicine Hack](#)

Back to the eland... The first thing we do when we see such a swelling is feeling it. Is it hard or soft? Normal temperature or hot? Then we aspirate whatever is inside: we stick a needle in, and try to aspirate some content from the swelling with a syringe and see what is inside. It is fluid, blood or puss? What is the colour? Is it clear or turbid? In the photos below you can see Ulf pressing on the swelling. After releasing the pressure, a dent can be seen – this is typical for fluid accumulation (the so-called “pitting on pressure”).

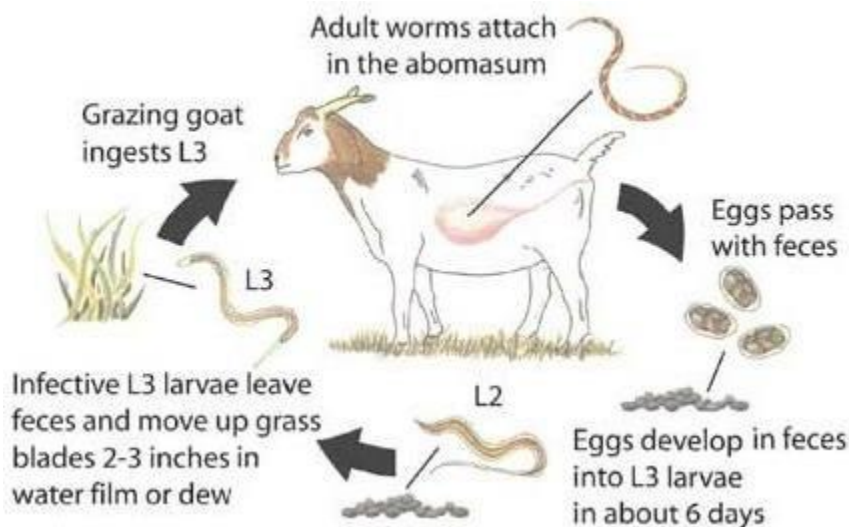


Checking the swelling. After pressing the swelling a typical fluid dent shows. © I. White

Seeing these symptoms all together our thoughts went to a heavy worm infestation, caused by *Haemonchus contortus*, also known as the barber’s pole worm (Afrikaans: Haarwurm). This common parasite feeds on blood, and is mostly known in sheep and goats, but antelopes can also become infected. Deaths of sable, roan and kudu are known. Unfortunately for us, *H. contortus* is one of the most successful parasites in the world; it has a high genetic diversity, and a great ability to develop resistance against anthelmintic (deworming) drugs. The infection, called *haemonchosis*, causes large economic losses for farmers around the world.

The adult worm attaches to the abomasum’s mucosa (the 4th stomach), and feed on blood. Females can lay up to 10,000 eggs a day, which pass from the host animal in the faeces. The larvae move up the grass, and gets ingested by the next animal. As you can imagine, this parasite can do severe damage to a herd!

Symptoms include anaemia (worms sucks the blood out of the animal – causing pale mucous membranes), bottle jaw and can even cause sudden death. Chronic infections are characterized by weight loss, failure to thrive, lethargy and weakness.



Life cycle of *Haemonchus contortus* © [Safi, Khattak & Hussain \(2018\)](#)



Haemonchus contortus under a microscope

© [El-Ashram & Suo \(2017\)](#)

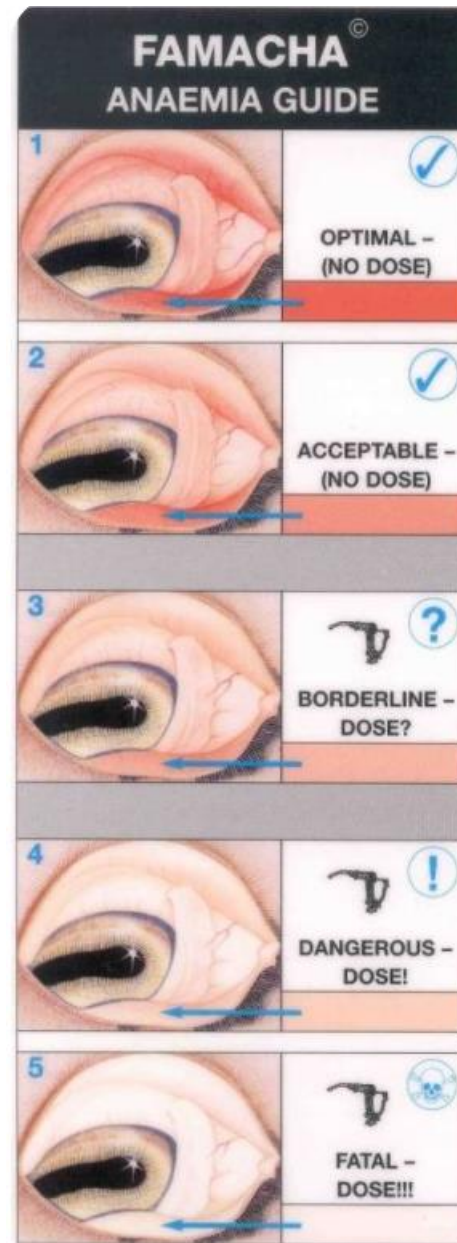
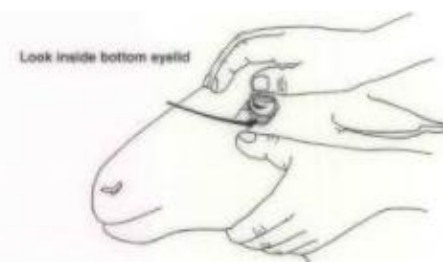


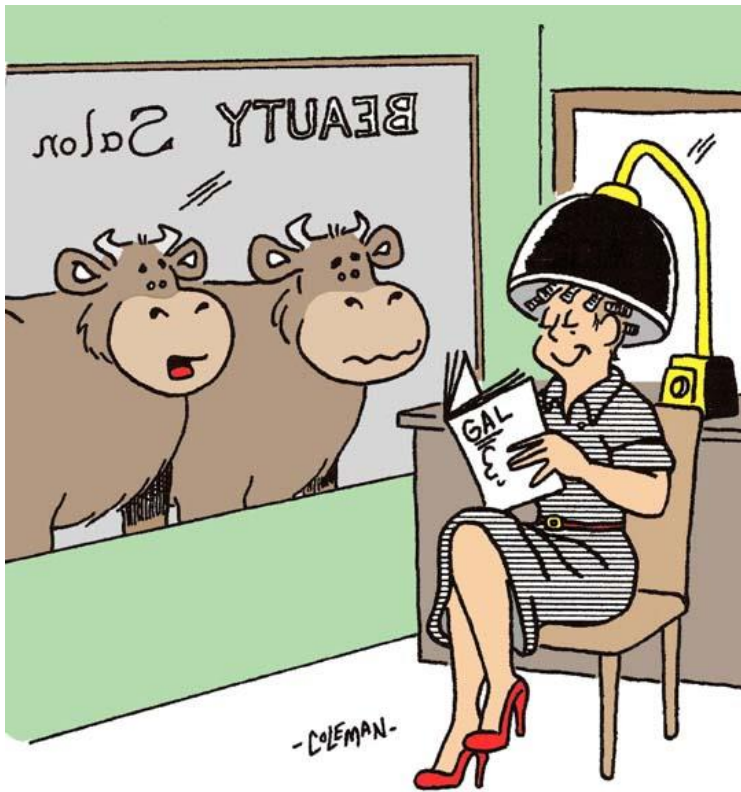
We collected blood from the eland and tested it at Rhino Park Veterinary Clinic. The tests showed that she had a low haematocrit (measurement of the amount of red blood cells in the blood), indicating that these worms were very busy draining her blood! The farm manager luckily already dewormed her a few days before, so we gave some additional deworming, antibiotics and multivitamins. With some supplemental feeding to regain condition again she was fine.

What can you do to keep this parasite away? In livestock look for signs of anaemia – pale mucous membranes (FAMACHA – see on the right), and bottle jaw. FAMACHA is based on evaluating and scoring the mucous membranes of the eye, whereby 1 is normal, 5 means severe anaemia. This chart is only applicable for *H. contortus*, not for other worm infections. If you suspect infections with *H. contortus*, confirm with your vet regarding diagnosis and treatment. As this worm has become very resistant, be careful with using the same deworming over and over again, and be very aware for underdosing!

We get a lot of calls where farmers want to dart their sables/roans with an injectable deworming, usually Ivermectin, Dectomax or similar. The darts they usually have are 2-3ml darts, however, the dosage of these dewormers is 1 ml per 50 kg. That means with a 3ml dart, the sable gets a dose in for 150 kg, while big males weigh around 250kg, and females around 200-220 kg. Darting 3ml into the animals is a big underdosage, which results in the worms getting the chance to become resistant against the dewormer, thereby creating only more problems for the future. There are 5ml darts on the market, but then one must get very close to the animal to dart it. To dart an entire herd like this is almost impossible.

In case of wildlife, if you suspect that you have a worm problem in your herd, rather call your vet and immobilize the weaker animals. The vet can thoroughly check the animal and give the right medication. For infections with *H. contortus* we prefer to use Cydectin® (active ingredient Moxidectin 2 % *m/v*) over Ivermectin, since there is a lot of resistance against Ivermectin. Another option is to put deworming in the food (e.g. Panacur or Ivermectin powder), but then we have the issue that the dominant animals usually eat most of the food, and the weaker ones (who really need the deworming!) don't get enough in. It is important to note that many dewormers are very toxic when administered in overdose. It is thus advisable to have the admixing of dewormers done professionally e.g. by Feedmaster.





" I DUNNO...LOOKS LIKE SOME KIND OF MILKING MACHINE - BUT SHE'S WEARING IT ALL WRONG..."

DR ULF TUBBESING

P.O. BOX 50533, BACHBRECHT,
WINDHOEK

+264 (0) 81 128 3050

ULFT@AFRICAONLINE.COM.NA

MARISKA BIJSTERBOSCH

+264 (0) 81 382 8473

+31 (0)6 4369 3095 (WHATSAPP)

MARISKA@WILDLIFEVETSNAMIBIA.COM

WWW.WILDLIFEVETSNAMIBIA.COM

FACEBOOK: [WILDLIFE VETS NAMIBIA](#)

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