NEWSLETTER SEPTEMBER

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Hernia

Dear clients,

Days are getting hotter, and at the same time trees and bushes start to flower. We hope the rains come soon! In this newsletter we give a short update on Ulf, and to all Namibian farms, we would like to ask you to help NARREC, who are in need of carcasses for their rehabilitation centre. Furthermore you can read about the fascinating 'upside-down' life of bats, and hernias. Most of you heard of this term, but what is a hernia exactly? Have a wonderful day!

Kind regards, the Wildlife Vets Namibia team

UPDATE ON ULF

Dear all,

As most of you know Ulf got severely burned while fighting a veldfire on his farm at the end of August. I am very happy to tell you that Ulf is doing very well considering the circumstances! His face already looks all healed, and he even looks a lot younger with this 'fresh skin' 🕑 His right hand, left leg and left arm are already out of the bandage. It's just the right arm and right leg that still have some bad patches, but the doctor is impressed with the healing progress, and she thinks no further surgeries are needed. Ulf always says 'onkruid vergaan nie' (weeds don't die) and yet again he is quite right! Thank you again for all the wonderful messages, it is amazing to know how many people think of him! We hope to be back in full swing soon again!

Many thanks,

Kind regards, Mariska

CARCASSESS NEEDED FOR NARREC

Namibia Animal Rehabilitation Research and Education Centre (NARREC) is a well-known centre for injured, orphaned and misplaced wildlife near Windhoek. They are especially renowned for their work with all kinds of birds. For more information on their work, have a look at their website <u>here</u>.

To all Namibian farms; NARREC is in desperate need of carcasses to feed their birds of prey and vultures at the rehab centre, and to use in their vulture restaurant. Should you have anything available, please contact Liz Komen from NARREC. Her number is: 081 129 0565, or you can contact Mariska about it (contact details on the last page).

It is greatly appreciated \bigcirc

White backed vulture - Witrugaasvoël © M. Bijsterbosch



THE UPSIDE-DOWN LIFE OF BATS

Perhaps not everybody's favourite, but bats are really cool animals! Some species literally eat hundreds of night-flying insects and mosquitos in a single night! Others help with plant pollination, and their faeces, called guano, can be an excellent fertilizer for your garden.

Ever wondered why bats hang upside down? Why not sit and rest like a bird? For any flying animal, to be able to fly, weight should be reduced as much as possible. Most birds for example have feathers and hollow bones, but still have strong enough legs to walk and perch. Bats, the only flying mammals on earth, have developed very light membranous wings, but they kept their solid bone structure. The one thing that bats could reduce weight on, were their legs, which were adapted to be used as claws to rather hang than perch like a bird! Since birds occupied most niches for flying during the day, bats found their niche by being night-active.

This means that bat legs are simply not strong enough to hold their weight; the pressure would be too much for the small bones. There are, however, some exceptions to this rule, as some fruit-eating bats still have some locomotive abilities which helps them climb and reach for fruits.

Bats also don't have strong enough wing muscles to generate the lift that is required to get into the air. But when you hang upside down in the air, you don't need this lift! They just drop down, open their wings and go! Hanging upside down is also a great way to hide from danger, and there is little competition for space, as other flying species would need to sit, instead of hanging around like bats do.

A final interesting note... If we would hang upside down like a bat, our blood would pool into our head and soon we would be unconscious. Since the bat is so small and compact, their heart can easily distribute the blood around the body, no matter being up, or down!



One of the Namibian bat species, we think (with the help of Jamie Bouhuys and Cher Muller – thank you guys!) this is a Sundevall's leaf-nosed bat (Hipposideros caffer, also called Sundevall's roundleaf bat). What do you think? Let us know! © M. Bijsterbosch

HERNIA

Quite a common problem, in humans and animals, are hernias. A hernia is an opening or weakness in the wall of a muscle, tissue or membrane that normally holds an organ or fatty tissue in place. If the opening or weakness is big enough, part of that organ/tissue might poke through that hole.

A hernia can be congenital, meaning the animal was born with this condition, or it can be a consequence of an injury or trauma. There are many different types of hernia that can occur in different parts of the body.

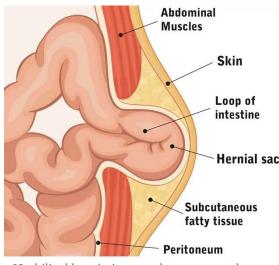
Below we describe some of the more common hernias we see.



Umbilical hernia

In mammals, umbilical hernias are common. This is an opening in the abdominal wall where the umbilicus (belly button) is located.

For this example we focus on cats, but it's basically the same for all mammals. The umbilical cord connects the mother to kitten. The umbilical cord, which carries oxygen and food to the foetus and removes waste, goes from the placenta through a hole in the unborn kitten's abdominal wall. This is called the *umbilical ring*. Once the kitten is born, this umbilical ring should close within a few days. But sometimes this hole does not close properly, and fatty tissue, or part of the intestine can herniate through. One can usually feel or see a small swelling (bubble) under the skin near the belly button which, in most cases can be pushed into the abdominal cavity. Unless the blood supply to a gut loop in the hernia is compromised, umbilical hernias are not considered an emergency.



Umbilical hernia in a cat, here you see that part of the intestine herniated (protruded) through an opening or weak spot of the abdominal muscles. © <u>Cat-World</u>

Since these hernias are unsightly and could develop complications later in life, we tend to surgically repair these in cats and dogs when they are ready to be spayed/neutered. We cut away the edges of the hernia ring (basically we take away the scar tissue that will not heal properly, leaving just fresh tissue) and then stitch the hole closed.

Traumatic abdominal hernia

Sometimes, when an animal gets a hard, blunt blow onto the abdomen (e.g. dog in a car accident, antelope that gets kicked), the muscle of the abdominal wall can tear apart and fatty tissue and the intestines can pop out.

In this sable for example the abdominal muscles were torn following blunt trauma (a horn injury would likely cause a penetrating wound). This could happen when an animal runs into a stump, receives a kick to the abdomen etc.

If it is a minor injury, healing may be spontaneously by scarring over the wound. The body will respond by making '*adhesions*'. An adhesion is scar tissue that will join the two surfaces of the body that have become separated. In this case it was a pregnant animal where the hernia got bigger and bigger, making surgical repair the only feasible option.

The procedure is basically the same as with the umbilical hernia. A skin incision is made, the hernia ring is cut away (leaving fresh tissue) and the hole is stitched closed again. Not an easy task in big hernias, as the abdominal organs (e.g. intestines) keep wanting to pop out. And ruminants (like the sable) often bloat when lying on the side, making it even more difficult! In big hernias in big animals, we use stainless steel and very strong suture material that can hold the pressure.



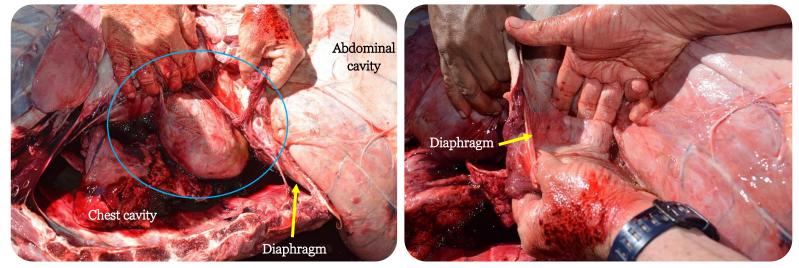
Sable cow with a hernia, that became bigger and bigger as she was pregnant and the foetus was growing. © M. Bijsterbosch WILDLIFE VETS

Diaphragmatic hernia

The diaphragm (Afr. middelrif) is a muscle that separates the abdominal cavity from the chest cavity. A tear or disruption in the diaphragm is called a *diaphragmatic hernia*. Sometimes animals can be born with this defect, but more commonly it happens following blunt trauma (a big blow on the abdomen, car accident) or an increase in the abdominal cavity (when an animal has difficulties giving birth).

When the diaphragm is not intact, abdominal organs such as the stomach, liver and intestines are able to enter the chest cavity. If the tear is small, you might not notice anything wrong with the animal. When the diaphragmatic tear is bigger (thus allowing more intestines, spleen, liver etc. into the chest cavity) or in cases where intestines in the chest cavity start distending due to gas accumulation, the animal will show severe breathing difficulties, abdominal pain and, if not surgically corrected, will suffocate.

Unfortunately when this happens in wild animals, it is usually already too late before we can do aything, and we usually only notice this during a PM examination.



These photos come from a Post-Mortem examination we did on a sable cow in 2019. We were called out to treat her as she was in a bad condition but, by the time we got to the farm she already died. In the blue circle you can see that the reticulum (one of the fore-stomachs) had herniated through the diaphragm (yellow arrow). The reticulum is supposed to be in the abdominal cavity, normally the diaphragm makes sure the chest- and abdominal organs are divided from each other. For some unknown reason, the diaphragm had a hole (see right photo), and part of the reticulum poked through.

The sable was heavily pregnant, and the abdominal pressure might have caused a weak spot in the diaphragm to rupture (the weak spot might have been caused by a blow of the sable bull – we don't know), and the reticulum to be pushed through. © M. Bijsterbosch





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