

NEWSLETTER JULY

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Dear clients,

In this edition we discuss an interesting question we received, about the number of teats of an impala. Do you know how many they have? And why? Well, it's quite a confusing story! The next article is about anthrax (miltsiekte), an important disease endemic in Namibia. Lastly, we call on you to join the Wildlife Ranching Namibia Info Day on 02 August, it will be an interesting day where you can meet experts in the field of game ranching, and of course fellow game farmers! Kind regards, the Wildlife Vets Namibia team.

TEATS AND UDDERS – A CONFUSING STORY!

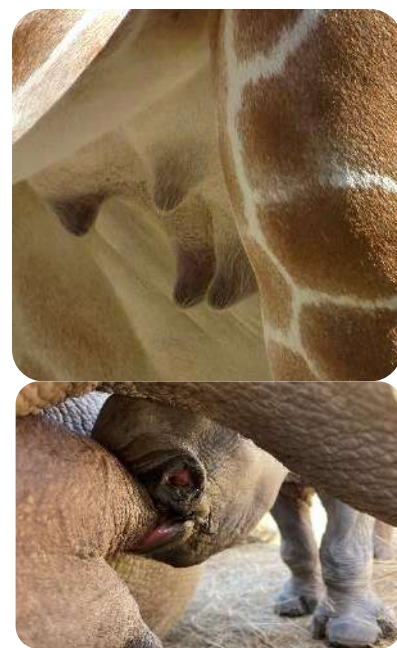
Impalas, like all antelopes are mammals. Simply said, a mammal is an animal (or human) that feed their offspring with milk. 'Mamma' is the Latin name for breast, hence the name mammals. Milk is produced by a mammary gland. In humans, primates and elephants they develop on the chest, and we call them breasts. In ruminants, the mammary glands develop in the groin, and we call them udders. A teat is a projection from the mammary gland through which the milk flows, and which feeds the offspring.

Recently we got a question, why does an impala have four teats, but only gets one lamb? A question even Aristotle wondered about, and to be honest... we still don't really know! One theory we do have, is the "one-half rule"; the average litter size is typically half the number of teats available. If a mammal only has one mammary gland, and that one gets damaged by injury or sickness, the animal cannot provide milk, and the offspring dies. When it has a spare, at least the animal can continue to nurse its offspring.

There is however a great variation in the animal kingdom. A rhino or horse have two teats, an impala, giraffe or cow have four, and pigs can have 18 teats! And then there is always the exception to the rule, the naked mole rat... They can have litters up to 28 pups, but usually only have 12 teats... The question is, why do cows and antelopes, who generally speaking only produce one offspring, have four teats and not two? And goats, who only have two teats, often get twins or even triplets?

It is not an easy question to answer, at one point in evolution nature has decided some animals have four, and others two teats. When the offspring exceed the number of teats, the offspring will face hunger and might die. But the number of teats is not the only factor we must consider. Milk physiology (e.g. goat milk has more protein, and is thus more nutritious than cow milk) and how fast milk is produced also play a role in the number of offspring. If milk is produced fast, then an animal can have more offspring than the number of teats. If the milk production is slow, then the offspring will have to feed on more than one teat.

Having more teats is an evolutionary advantage; in case a teat gets damaged, or is not working due to some mutation, the offspring can still be fed by the 'spare' teat. Also, in case an animal does give birth to more (it happens that impalas get twins), multiple teats allow for better distribution of milk, and reduces competition between the siblings. When offspring drink from different teats, it can reduce mastitis (inflammation of the mammary gland).



A giraffe udder with four teats © [4028mdk09](#) and a rhino calf drinking © M. Bijsterbosch

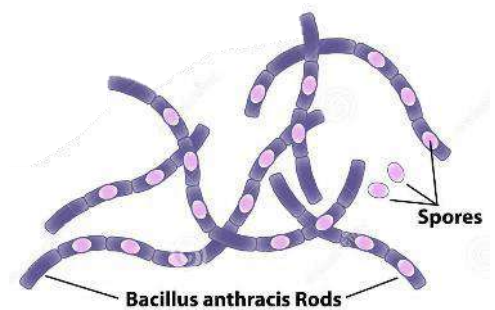
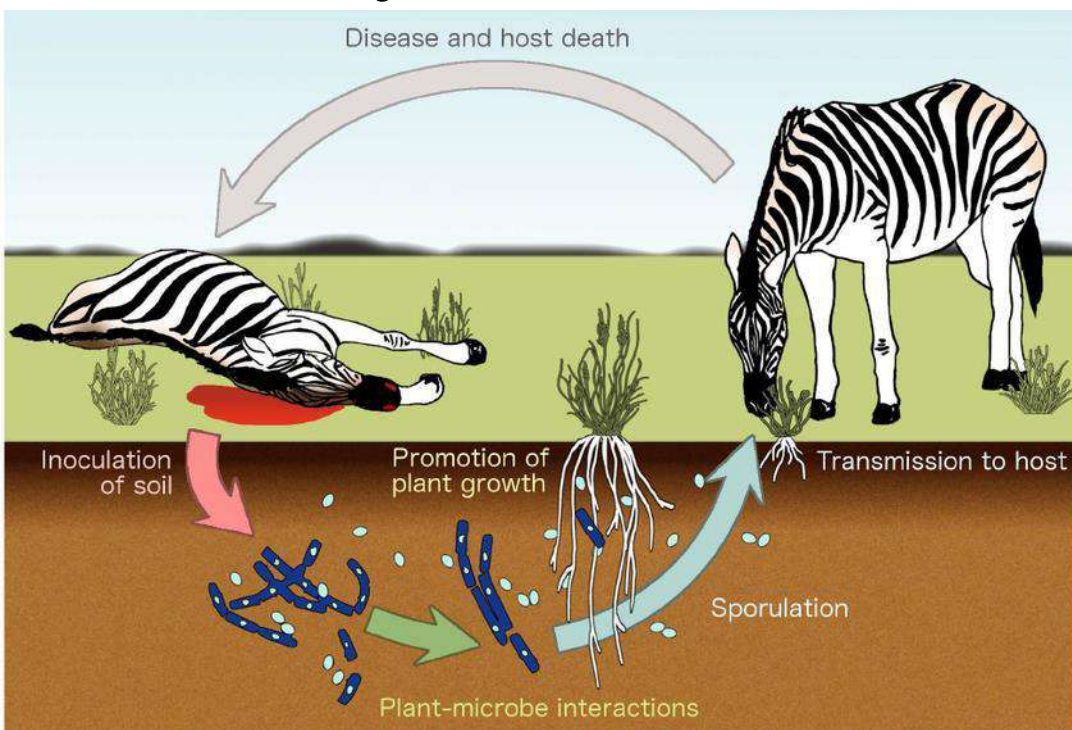
ANTHRAX – MILTSIEKTE

Recently we have been consulted about two separate, highly likely cases of anthrax in wildlife in Namibia. Anthrax, or Miltsiekte in Afrikaans, is a serious infectious disease caused by the bacteria *Bacillus anthracis*. Anthrax affects both domestic and wild animals around the world, and can cause severe illness and death in humans when they come in contact with affected animals. What follows is a summary of our article 'Anthrax in Wildlife'. The entire article can be read and downloaded [here](#).

Namibia is a country that experiences repeated anthrax outbreaks. Think about the much-publicized mass hippo mortality in the north-east of Namibia some years ago. In the Etosha NP, mortalities due to anthrax are a common occurrence and considered part of the ecology. The anthrax bacteria exists in two forms; a vegetative and a spore state.

The vegetative, disease causing state is the rapidly growing and reproducing form of the bacteria, and happens in an infected animal (or human!). When the animal dies, and the carcass is opened by scavengers (or somebody doing a PM examination), the vegetative state is exposed to oxygen, and starts to form spores. These spores can then contaminate the surrounding soil, vegetation and water. Usually, spores survive for three to four years, but they can stay dormant and survive for 50 years!

How do animals get anthrax?

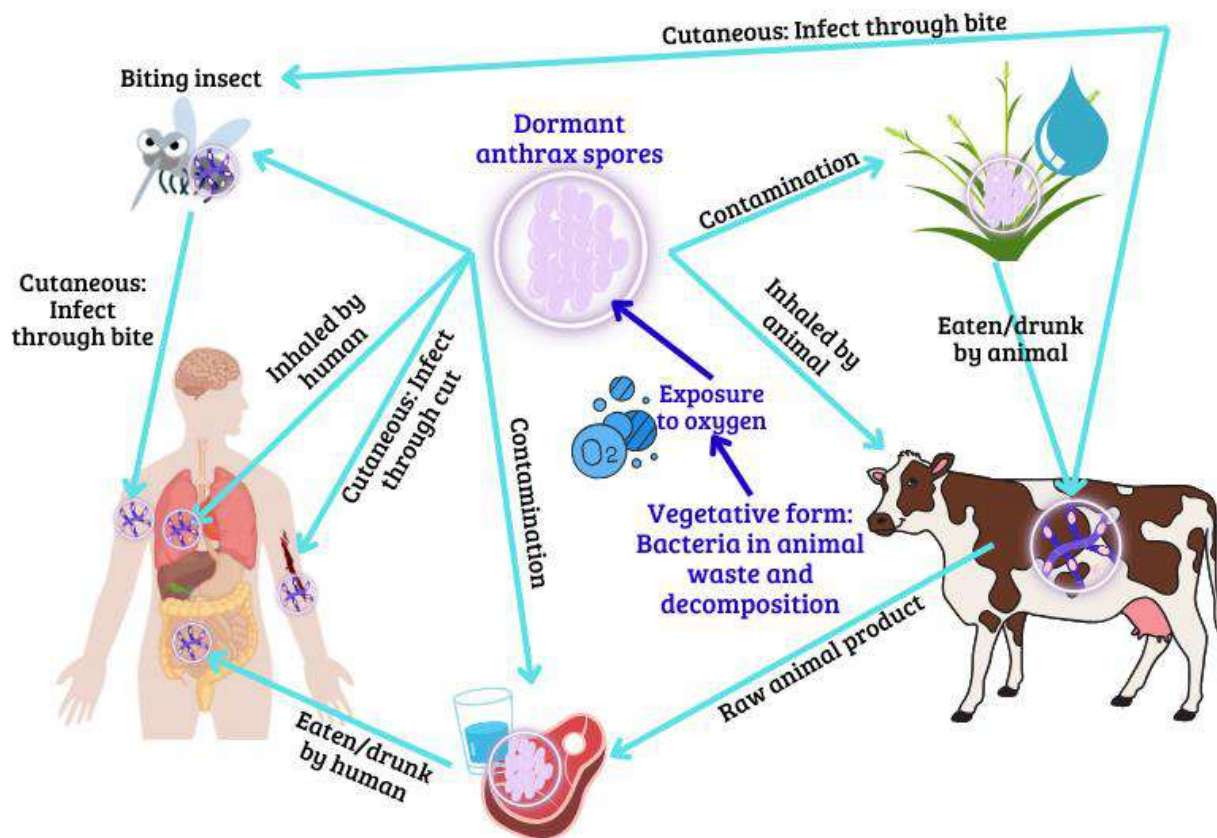


Anthrax bacteria are large, rod-shaped bacteria © [OSweetNature](#)

Anthrax is quite common in herbivores, who consume spores while grazing or browsing. © [Kelsey Wood](#)

Usually, animals get anthrax by ingesting spores while grazing or browsing, drinking contaminated water, and/or breathing in contaminated dust (inhalation). Insects also play an important role in the transmission. This can be due to biting flies, or flies depositing contaminated vomit/faeces on vegetation, after which an animal eats it.

It is important to remember that anthrax is a zoonosis! People can get anthrax by eating/drinking contaminated food or water, by breathing in spores, and via the skin (e.g. biting flies or via wounds).



Anthrax goes in cycles. An animal gets anthrax and dies. When the carcass is opened, and the vegetative form is exposed to oxygen, spores are formed. These spores contaminate soil, water and vegetation, that can infect other animals. Anthrax is a zoonosis, that means that the disease can be transmitted from animals to humans. © Wildlife Vets Namibia

How to recognize anthrax?

In southern Africa alone anthrax has been described in at least 52 species. Herbivores seem most susceptible to anthrax. The incubation period (time span between exposure and first symptoms) of cattle is 1 to 14 days. In wildlife we usually do not see any symptoms, as the animals are just found dead. You must be suspicious of anthrax when a healthy animal dies suddenly, occasionally preceded by a short period of disorientation.

Once the animal is dead, they usually have bloody discharges from the body openings, such as the mouth, nostrils, ears and anus. Another characteristic is the rapid bloating of the carcass, an incomplete rigor mortis, early breakdown of tissue (quick rotting process) and the absence of clotting of the blood.



A white rhino bull with bloody discharges from the nose and eyes, a zebra that died of anthrax with bloody discharge from the nose, and the absence of blood clotting in an anthrax carcass © U. Tubbesing

Carnivores seem more resistant to anthrax, but we did have several cases in lions. Cheetahs are highly susceptible to the disease and usually die within hours of ingesting meat from an infected carcass. Symptoms in predators that we have seen are usually a poor body condition, and most importantly a swollen face (often mistaken for snakebite!), deteriorating rapidly, laboured breathing and death.



Three different lions with anthrax at different times and places, the first lioness on the photo survived. Affected pride members were treated with antibiotics and survived. © U. Tubbesing

How to diagnose anthrax?

Since there are quite a few diseases or conditions that can cause acute mortalities, e.g. African horse sickness, various Clostridial diseases incl. blackleg, enterotoxaemia etc., Rift Valley Fever, poisoning, snake bites, lightning strike or metabolic disorders (bloat, magnesium deficiency, lactic acidosis), the mere occurrence of acute death are not diagnostic.

Highly suspicious for anthrax is finding a sudden increase in mortalities (often affecting more than one animal species at the same time) in a certain region. The carcass often seems to be decomposing quicker than expected and usually has lots of bloody liquid dripping out of the mouth, nose, anus and genital openings.

If you suspect anthrax, do NOT open the carcass – contact your vet!!

Never open a suspected anthrax carcass, as you do not want to release the spores, and you do not want to become infected! Characteristic post-mortem signs of anthrax are dark unclotted blood, enlarged haemorrhagic (bloody) spleen, haemorrhages throughout the organs and a dark oedematous (accumulation of fluid) intestinal tract.

In most of cases in hoofed animals and cheetahs, your vet will be able to see the classic anthrax bacteria on a blood smear. It is important to know that NOT in all cases the bacteria are seen, and the blood smear must be fresh (not older than 24h). The Central Veterinary Lab (CVL) can check (fresh) samples of the animal and the soil for signs of anthrax. In especially rhinos and lions it is however very difficult to get a positive anthrax result.

What to do when you suspect anthrax?

When you suspect anthrax, avoid contact with the carcass, and call your veterinarian. Take photos, and explain the situation. Try to keep scavengers away and control flies as much as possible.

What you must do with the carcass has been debated for many years and there is no 'best' solution. Burying the carcass might lead to contamination of the soil and water, while burning the carcass might throw the spores into the air. Your goal is to avoid contamination of soil, water, air, people and animals.

Depending on your situation (are you in rocky or sandy area, how big is the carcass?) you could bury the carcass, and disinfect the carcass and the area where the carcass was with F10. Make sure you wear gloves, boots, cover your skin and wear a mask when you handle the carcass, and disinfect tools/equipment used.

IMPORTANT:

- 🐾 Anthrax is a controlled disease for a good reason. Discuss the case with your veterinarian and if proven positive, it must be reported to the local State Veterinarian.
- 🐾 Don't EVER use meat from an animal that died under suspicious conditions for human consumption or to feed carnivores. Ingesting anthrax infected meat can be highly fatal!

What to do in case of exposure?

When wildlife is infected, we usually only see that they died. In case it is suspected they might have become infected with anthrax, it is important to act quick, and treat with a high dose of antibiotics. High-value animals, and animals in areas with known anthrax outbreaks, can be vaccinated. For some species, such as rhinos and elephants we use a special vaccine, called [Rhinovax](#).

About 2,000 people globally get affected each year by anthrax. If the diagnosis is made early enough, anthrax is in most cases treatable. Anthrax is not a contagious disease, meaning it cannot spread from person to person.

People that have been exposed to anthrax should seek medical expertise as soon as possible, and should get preventative antibiotics. Contaminated body parts should be washed with antimicrobial soap and water. Anthrax is a disease you do not want to get, so make sure you are very careful!

WILDLIFE RANCHING NAMIBIA INFO DAY 2024

Wildlife Ranching Namibia presents another interesting information day! This day will be a unique opportunity to gain insights from highly-experienced speakers, and of course it is a great chance to network! The following lectures will be given:

- 🐾 Dr. Hassel: Rabies in Kudus Revisited
- 🐾 Wiaan van der Linde: The Buffalo Economy: Trends and Insights
- 🐾 Dr David Pretorius: New Technologies within the Wildlife Sector
- 🐾 Richard York: New Developments regarding Wildlife Ranching in South-Africa
- 🐾 Innovations in Farming: Rhino Conservation, Bush Encroachment Management, and more!
- 🐾 Trophy Caping Course by Nyati: Hands-on Techniques and Best Practices

Date: Friday 02 August 2024

Location: Arebbusch Travel Lodge, No. 1 Golf Street, Windhoek

Please have a look at the next page for more information. If you have any questions, or if you want to make a reservation, please contact Caren Winckler at wildliferanchingnamibia@gmail.com or +264 (0)81 211 7252. The RSVP date has passed already, but if you are quick and ask Caren nicely, we are sure she will book you a spot! 😊



WRN INFO DAY 2 AUG 2024

“Discover the Full Potential of Our Wildlife Industry”

Join us for an insightful day
featuring renowned speakers and
engaging sessions on key topics
affecting the wildlife industry.

Venue: Arebbusch

Registration: 08:00 for 08:30

Speakers:

- **Dr. Hassel:** *Rabies in Kudus Revisited*
- **Wiaan van der Linde:** *The Buffalo Economy: Trends and Insights*
- **Dr David Pretorius:** *New Technologies within the Wildlife Sector*
- **Richard York:** *New Developments regarding Wildlife Ranching in South Africa*
- **Innovations in Farming:** *Rhino Conservation, Bush Encroachment Management, and More Exciting Topics!*

Registration Fee: N\$150 (refreshments included)

RSVP 22 July 2024

Contact: Caren Winckler 081 211 7252
wildliferanchingnamibia@gmail.com



PLUS Trophy Caping Course @ Nyati
Hands-on Techniques and Best Practices

An Event You Won't Want to Miss!

WRN CAPING COURSE 2 AUG 2024

“Master the Art of Caping: Elevate Your Skills”

Join us for a short workshop designed for those who perform
skinning on the farm and want to learn the proper tech-
niques for caping. This hands-on training will ensure you
gain the expertise needed for high-quality caping.

Venue: Nyati Wildlife Art • **Time:** 07:30 for 08:00

What You'll gain:

- Proper caping techniques for various species
- Tips and tricks from industry experts
- Certificate of completion awarded at the end of the day

Participation Details:

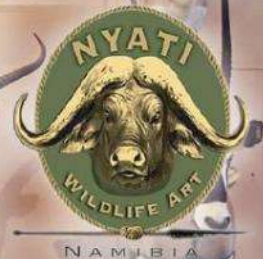
- Open to all, with priority given to those responsible for skinning on the farm
- Each farm or farmer may send a maximum of 2 people

Price: WRN Members 1st person: FREE
2nd person N\$250

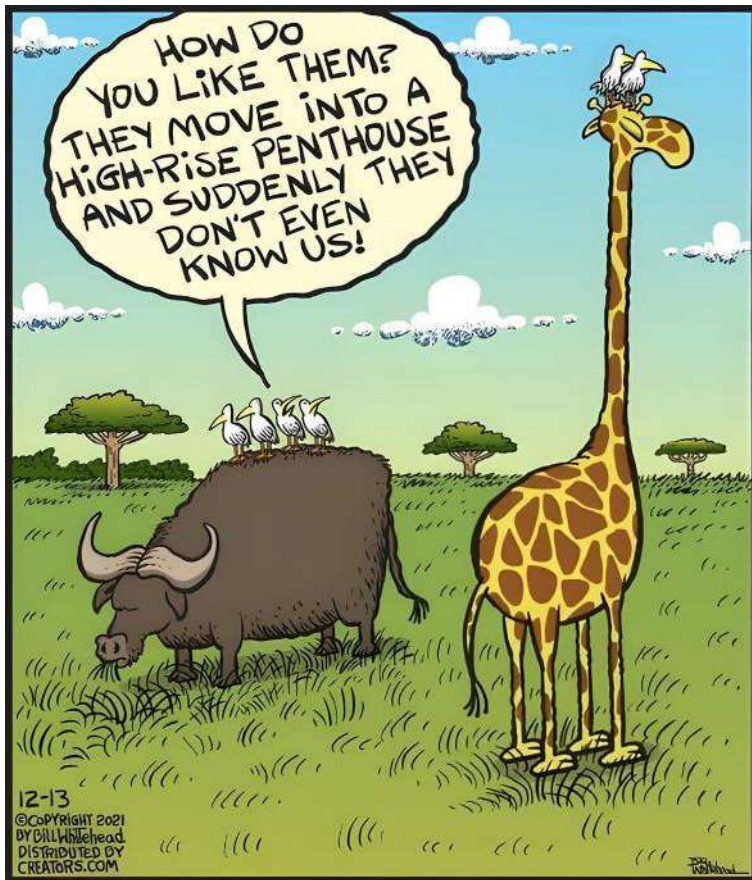
Non-Members Per person N\$250

RSVP 22 July 2024

Contact: Caren Winckler 081 211 7252
wildliferanchingnamibia@gmail.com



Don't Miss This Opportunity to Enhance Your Caping Skills!



Dr Ulf Tubbesing
P.O. Box 50533, Windhoek
+264 (0)81 128 3050
ulft@africaonline.com.na

Mariska Bijsterbosch
+264 (0)81 382 8473
+31 (0)6 4369 3095 (WhatsApp)
mariska@wildlifelivetsnamibia.com



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