

NEWSLETTER FEBRUARY

Dear clients,

In this newsletter you can read more about rabies in rhinos. We are all well informed about the kudu/eland rabies problems, but recently we saw two rhinos that died of rabies! When a rhino has nervous symptoms and dies, make sure a proper post-mortem is done, and the brain is tested for rabies. It is important to document these cases as there is little known about rabies in rhinos. Lastly, we are planning to present Post-Mortem courses, where we will teach you how to conduct a proper PM yourself. When interested, let us know!

Take care!

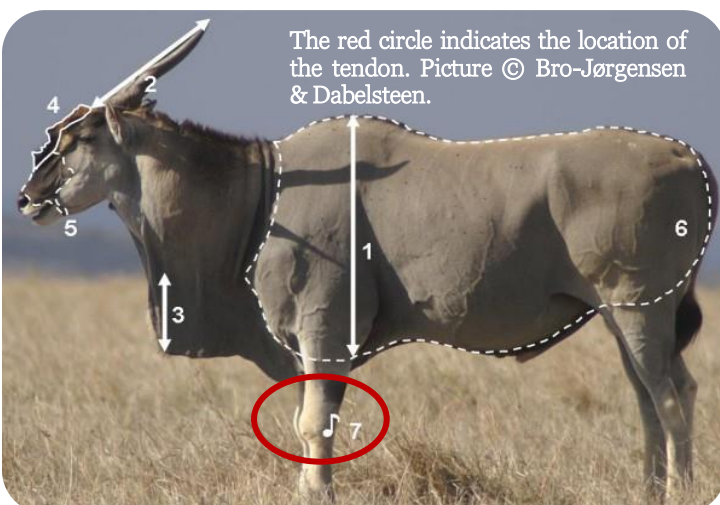
Kind regards, Ulf and Mariska

CLICKING ELANDS

When you watch eland bulls passing by, you might have heard a strange clicking sound, like castanets are clapped together. Ever wondered what this is? Well, scientist did, resulting in this phenomenon having been debated for a long time. Arthritis, cartilage damage or the hoof halves that click together were all speculations of what the clicking sound could be.

Nowadays scientists believe the clicking sound comes from a tendon on the lower leg, that is snapping over the lower leg bones. The clicks are a message to other males, where the clicks may give an indication of the size of a bull in question. The bigger a bull, the lower the frequency of the clicks, and the deeper the clicking sound. When an eland grows, this tendon gets longer and wider, and the clicks deepen in sound. This way a bull can communicate to other males about his fighting conditions; it is a way of showing dominance from a distance, without having to fight.

The clicks are a very honest signal, that can't be faked. Besides the clicks, eland bulls also have visual traits to show who is the boss (see picture). These include overall size of the body (1), the horn length (2), the size of the dew flap (3), the size of the hair tuft on their heads (4), the darkness of the face mask (5) as well as the greyness of the eland's body (6).



If you want to read more about this study¹, and hear some of the recorded click sounds, click (with your mouse, not your tendon 😊) [here](#).

¹ Jakob Bro-Jørgensen and Torben Dabelsteen (2008). *Knee-clicks and visual traits indicate fighting ability in eland antelopes: multiple messages and back-up signals*. BMC Biology.

RABIES IN RHINOS

Rabies can have devastating effects among unvaccinated kudu and eland populations. Theoretically all mammals can acquire rabies, however some species are more susceptible than others. Quite recently we had two surprising rabies cases, in white rhinos.

The first rhino was a 5-month old white rhino calf in Northern Namibia. We were called out in September 2018 as he showed strange behaviour, e.g. running away from his mother, he was often found near or in water and he had muscle tremors. When we saw the calf, he did not look too bad, except that he was very dehydrated and weak (ataxic) in the hind quarters. Pending a diagnosis we gave symptomatic and supportive treatment and collected diagnostic samples (these failed to yield an obvious diagnosis). After spending the night literally moving from water hole to water hole (and frequently getting stuck in the water) the calf's condition rapidly deteriorated and it died the next morning. We performed a full post-mortem examination which did not reveal any obvious pathology. During the examination we collected samples of all organs and sent them to labs in Namibia and SA. Both laboratories reported a strong positive result for rabies in the brain samples.

The second rhino was an 8-10 year old white rhino bull seen in central Namibia. In December we were called out to the farm to examine the rhino which appeared to be weak and off-balance in his hind quarters. Upon arrival, the bull was visibly weak and ataxic (loss of coordination of the limbs) on the hind legs and showed severe muscle wasting in the hind quarters. When chased, he frequently stopped and went into a "dog sitting position". Once again supportive treatment was given but the prognosis was considered poor (in view of the recent similar case). Over the next 3 days the condition deteriorated with the bull becoming completely paralysed in the hind quarters. It also stopped eating and drinking. The rhino was euthanized and a full post-mortem was conducted. Again, not much was found in the post-mortem and samples were taken and sent away. This rhino also tested positive for rabies.



12 December; Initial examination showed severe hind quarter weakness and ataxia with dog sitting posture



15 December; the rhino showed severe muscle wasting of the hind quarters



15 December; the rhino was paralyzed in the hind quarter, he was still alert, yet unable to get up on the front (the rhino in these last 2 pictures was NOT darted)

Some years ago Dr Mark Jago also treated an orphaned black rhino calf which eventually developed nervous symptoms and died. It too tested positive for rabies.

We are thus aware of a total to 3 confirmed rabies cases in rhinos in Namibia. In contrast to the orphaned black rhino calf, which had scavenger bites around the ears and tail when rescued, neither of the two white rhinos seen by us had any lesions suggestive of a recent bite wound. The big bull was seen in an area with a history of an ongoing rabies outbreak amongst kudu and eland.

To the best of our knowledge rabies in rhinos in Africa has never been documented before. We found scientific publications referring to 3 confirmed cases on Indian rhinos in Indian zoos – these cases seem to be associated with direct and indirect exposure to stray dogs.

When comparing the symptoms seen in all the cases, there was some individual variation but all showed nervous symptoms, such as ataxia, falling/stumbling and weak hind quarters. Typical rabies signs such as aggression and excessive salivation were only observed in 1 Indian rhino.

Because very few people consider rabies an important disease in rhinos, we believe that the condition may be under- diagnosed and reported. The two cases seen by us occurred within a short period of time yet were spatially separated by around 500 km! These cases clearly demonstrated the importance of a thorough post-mortem examination (preferably by an experienced vet) and to have the brain tested for rabies. With more data we can better identify symptoms.

When rabies is prevalent in the area, we suggest to strongly consider vaccinating rhinos annually against rabies. The vaccine is inexpensive and has proven to be effective in companion animals as well as kudu/eland. We also strongly recommend to annually vaccinate your rhinos with Rhinovax® as well, this vaccine protects against anthrax and several clostridial diseases.

POST-MORTEM COURSE

It is a well-known fact that doing a Post-Mortem (PM) on a fresh carcass dramatically improves the chances on getting a correct diagnosis on the cause of death. However, Namibia is a vast country with relatively few wildlife/large animal veterinarians. As a result, farmers frequently do not have immediate access to (wildlife) veterinary service, especially during the game capture season. As a result, many animal mortalities annually go without the benefit of a PM being performed.

To address this problem we have been planning a PM course that aims at teaching farmers and farm managers the basic principles of doing a thorough and systematic PM. This will enable you to document (both in writing and by photo essay) and collect diagnostic samples from these animals. You can then submit your report, photographs and samples to us. I will process the samples and evaluate your reports, photos and laboratory findings with the aim to establish an early and accurate

diagnosis of diseases in the herd. This should help farmers to improve their general herd management and possibly prevent a disease from spreading. It will also facilitate the collection of much needed data and knowledge on diseases in wildlife in Namibia.



In the course you will be taught basic skills such as:

- 🐾 When do you do a PM, and when not?
- 🐾 Carcass handling
- 🐾 Applied anatomy and physiology (where are the organs, what do they do etc.)
- 🐾 Doing a systematic and comprehensive PM
- 🐾 Sample collection (e.g. formalin, sterile, blood smears, faecal impression) and handling
- 🐾 Proper reporting on patient history and PM findings
- 🐾 Basics of medical/forensic photography
- 🐾 Lesion identification and significance
- 🐾 Practical content: PM demonstration

In these times of economic hardship we will enable you to save money on veterinary fees (travelling and professional time) without having to sacrifice the opportunity to improve your knowledge and herd management on your farm. If you follow our instructions, you should be able to perform a good PM and collect suitable samples. Samples and a filled-in report sheet you can send to us, and we will process it all for you and submit the samples to a competent laboratory for analysis. Once the results are back, we will interpret these and discuss their meaning (in context with the history and PM findings) with you.

This will be an academically intensive one-day course with lectures in the morning and a PM practical in the afternoon. Costs will be N\$ 1500.00 per person including a binder with notes but excluding possible accommodation/catering costs (when needed). Accommodation and catering costs will depend on the location.

We will limit course participation to 15 attendees at a time and then, to make things easier and cheaper for attendees, plan to present the course in different areas of the country. Should you be interested in attending this course, please let us know so that we can plan. Please email your name, optimal time frame and region in Namibia to mariska@wildlifevetsnamibia.com.

If you would be willing to accommodate this course, please also let us know as well via the email above. We need a suitable place for the lectures (darkened room seating say 20 people), ideally with accommodation (for attendees who prefer to arrive the evening before), catering for +/- 17 people as well as a shaded slaughter/PM facility with access to water and an (improvised) table, and a fresh carcass on which we can practise a PM.

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