

# NEWSLETTER SEPTEMBER

## In this newsletter:

- 🐾 [Pre-orbital glands](#)
- 🐾 [Tapeworm cysts in antelope](#)
- 🐾 [Regional WhatsApp groups](#)
- 🐾 [DRC Game Translocation 2019](#)

Dear clients,

Our game capture season is coming to an end, but we are able to get an extension for October (depending on the heat of course). Read about the special communication glands animals have, and about a special case we had... We treated a roan with a big tape worm cyst. We also tell (and show) you about our latest DRC translocation; view our translocation video [here](#). All the best! Kind regards, Ulf and Mariska

## PRE-ORBITAL GLANDS

When you look closely at the head of a hoofed animal, you might notice that many of them have a sort of patch under their eyes. These patches are called the *Pre-orbital glands*. Animals use these glands to communicate and leave their scents behind. The glands are rubbed against twigs or other objects, and grass blades are manipulated into the glands to be covered with the scent. They can be either slit-like (e.g. duiker), or circular (e.g. wildebeest). The scents are extremely complex and can contain over 40 compounds. By depositing these scents, information about identification is transferred to others.

Other scent glands which are used for communication purposes by hoofed animals are the:

- 🐾 Sub-audal or sub-auricular glands (below the ear)
- 🐾 Foot or pedal glands
- 🐾 False hoof glands (behind and above the hoof)

Other ways of communication are done via faeces and urine for example. Many animals mark their territory by creating dung middens. The reproductive status of an animal is usually transferred by urine. The communication via scent is a complex topic, and as of today it remains quite a mystery!



*Circular pre-orbital gland in a golden wildebeest © M. Bijsterbosch*



*Slit-like pre-orbital gland in a duiker  
© M. Bijsterbosch*



*Pre-orbital gland cut open in a sheep. 'G' shows the pear-shaped pre-orbital gland, and the '\*' the pre-orbital gland pocket © [U.K. Moawad \(2016\)](#)*

## TAPEWORM CYSTS IN ANTELOPE

Recently we were called out for a roan cow who had a swollen hip. We immobilized the roan, and found an interesting finding... A tapeworm had created cysts inside the muscles of the hip, causing lots of discomfort for the roan.

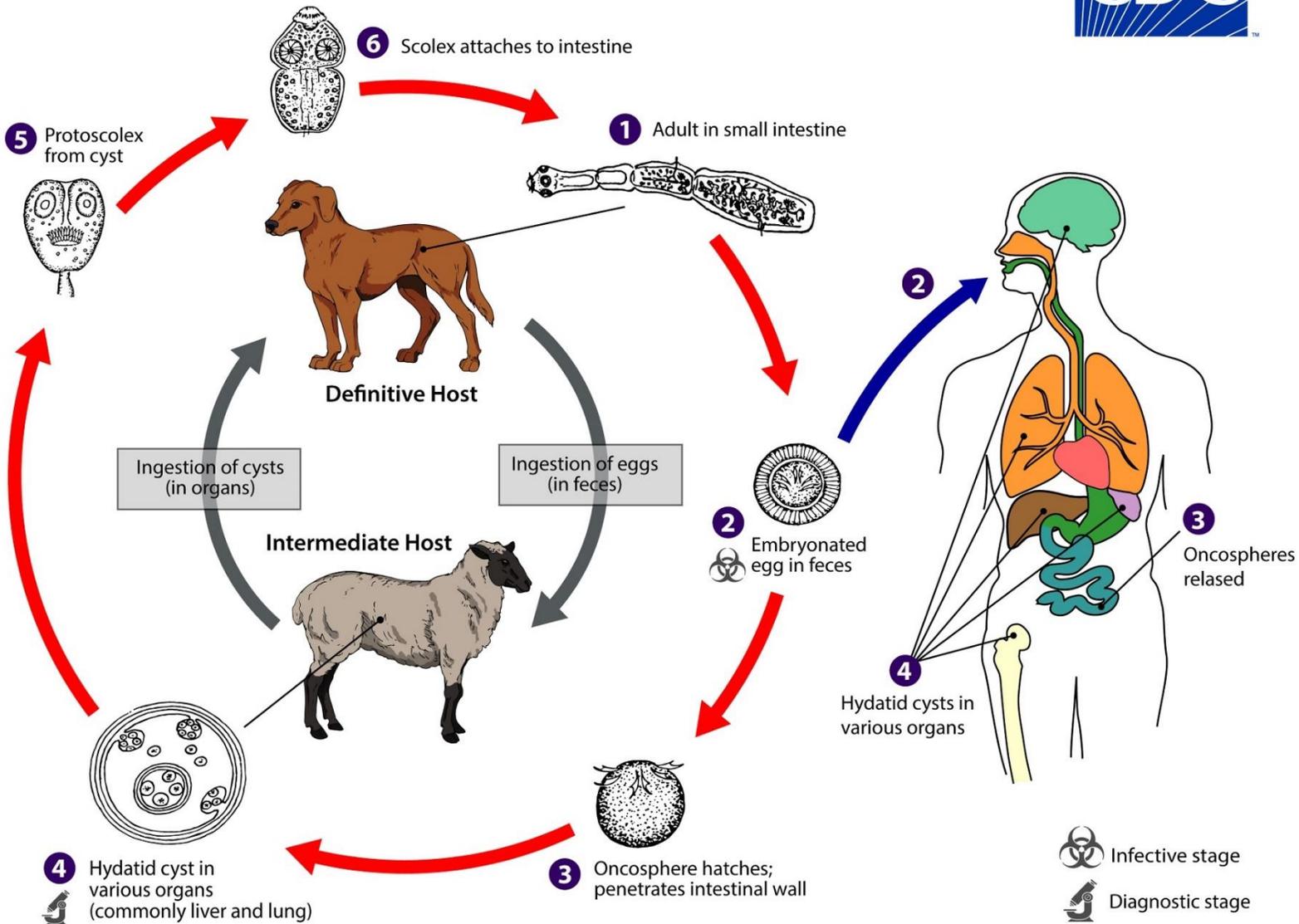


This particular tapeworm is the *Echinococcus granulosus*, which causes fluid-filled cysts in the body; we call this cystic echinococcosis. The cyst can occur in any organ of the body, from the liver, the lungs, muscles, brain or chewing muscles. The cyst can also lie free in the abdominal area. It is found in a wide range of species, from zebras, buffalo, hippos, impalas and even humans. Predators, including dogs and cats, can be carriers of the tapeworm, which are found in their intestinal tract. They excrete these eggs via their faeces, but do not get sick of it. You might find little white rice-sized tapeworm segments around the anus, this is one of the reasons people should wear gloves when working with predators (and deworm their pets!). Elephant and blue wildebeest do not seem susceptible for.

*The white little dots (2-7 mm long) are the larvae, which live in a fluid-filled cyst. If the cyst would break, all the larvae will disperse throughout the body, spreading the infection © M. Bijsterbosch*

The definite host (e.g. lion or dog) is rarely clinically affected by the infection. In the intermediate hosts (e.g. roan or sheep) the cyst grows very slow, and the animal won't show any signs until the cysts start damaging adjacent tissues and organs. In this case, the roan had an abscess-like lesion on the hip, but you might only discover the infection when you slaughter the animal. In that case, discard the meat in a way that scavengers cannot get to it. A predator can be treated with anthelmintic (deworming) drugs, like Praziquantel. In cases like in this roan, surgery is needed to remove the cyst, it would not help to deworm it as the deworming only works in the gut. The roan was stitched up and treated with an antibiotic, and she was fine again afterwards.

## Cystic Echinococcosis *Echinococcus granulosus sensu lato*



Life cycle of the *Echinococcus granulosus*. The adult *E. granulosus* (2-7 mm long) lives in the small intestine of a definitive host (e.g. dog) (1). Eggs are released, and passed on into the faeces (2). They are immediately infectious. When a host (e.g. sheep) ingest these eggs, they hatch in the small intestines, and six-hooked larvae (oncospheres) (3), penetrate through the intestines and migrate via the circulatory system to various organs (especially the liver and lungs). The larvae develop into a cyst, which gets bigger and starts producing parasite larvae (protoscolices) and daughter cysts. The definitive host (e.g. dog), becomes infected by eating the cyst-containing organs. After ingestion, the parasite larvae (protoscolices) attach to the intestines (5-6), and develop into the adult stage in 32-80 days (1).

Humans are intermediate hosts, and can become infested by ingesting the eggs (2). The larvae (oncospheres) are released in the intestine (3), and cysts develop in several organs (4). If the cyst ruptures, it may cause secondary cysts in other sites of the body. © [CDC](https://www.cdc.gov)

Be careful, cystic echinococcosis is a zoonotic disease (a disease that is transmitted from animals to humans), humans can become infected by ingesting the parasite's eggs in contaminated food, water, or via contact with faeces. Human infection with *E. granulosus* (also called hydatidosis) can lead to the development of cysts, usually in the lungs and liver, and sometimes in the bones, kidneys, spleen, muscles and central nervous system. It can take several years for the cysts to become big enough that they start causing signs. When it occurs in the liver, it can cause abdominal pain, nausea and vomiting. When the lungs are affected, it can lead to chronic cough, chest pain and shortness of breath. It is a complex infection to treat, which might even require extensive surgery. Thus... better to prevent an infection at all times! After handling animals, always wash your hands, do not touch faeces with your hands (were gloves), avoid ingestion of food, water or soil that might be contaminated with animals' faeces, deworm your dogs, vaccinate your livestock (esp. sheep) and work as hygienic as possible in the slaughter area. If you find a cyst, never cut it open! Discard the cysts by burning them. Never give infected meat or the cysts to your pet.

In our Post-Mortem course we will teach you this and many other interesting diseases infecting wildlife and livestock or domestic animals. We are busy planning the course, and we hope to start in November this year.

## **REGIONAL WHATSAPP GROUPS**

As you might have noticed, we have created regional WhatsApp groups. Whenever we are in a certain area, we notify the group, and you can join in. This way both time and kilometre fees are saved for all of us. If you are not yet in one of our groups, let us know, and we will add you.

We have groups for the following regions:

- 🐾 North of Windhoek (e.g. Okahandja/Otjiwarongo/Outjo/Tsumeb etc. area)
- 🐾 East of Windhoek (e.g. Omitara/Witvlei/Gobabis etc. area)
- 🐾 South-east of Windhoek (Dordabis/Nina etc. area)
- 🐾 South of Windhoek (Rehoboth and south)



8 trucks loaded with animals, destined for the DRC. All photos in this article © U. Tubbesing & M. Bijsterbosch



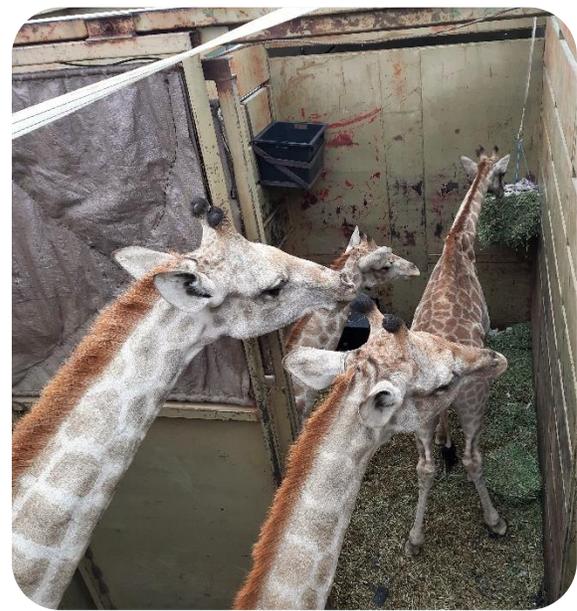
## DRC GAME TRANSLOCATION 2019

A few weeks ago we translocated game from several Namibian game farms to Parc de la Vallée de la N'Sele in the DRC. We became involved in this project in 2017, and since then we have translocated >1200 animals to this newly established reserve of 20.000 ha. This time we brought a total of 205 animals (waterbuck, blue wildebeest, eland, nyala and giraffe), a rather big project!

We transported the animals in specialized wildlife trailers and containers from Seis boma to the harbour of Walvis Bay. In the morning we loaded all the animals onto the trucks, and started driving in the afternoon. We arrived at the harbour early in the evening. All trailers and containers were loaded onto the ship, always quite nerve-wrecking sight, seeing our them dangling up in the air! We finished loading at night, and were on our way around 02:00!



A 4-day voyage on the Atlantic Ocean was lying ahead of us. The sea was very calm, and temperatures were nice during the first few days. We gave all the animals twice a day water and food. The first day the animals need to start getting used to this routine of having people walking above their heads, but soon they figure out that people mean food, and they settle down. We gave the eland, waterbuck and wildebeest teff-hay, and the giraffes and nyalas got lucerne and camel thorn pods.



*The animals quickly got used to the feeding routine. Along the way we were accompanied by a group of humpback whales, what an amazing sight!*



After 4 days on the ocean, we reached the mighty Congo river early in the morning. What a sight, this river is enormous! We reached Matadi harbour around 16:00, and soon the offloading started. Then it was time for the last part of the trip... a 10-hour road trip to the Parc! When we reached Kinshasa, we were escorted by the police, who did an amazing job in clearing the road for us! We went through this busy city quite smoothly, and reached the Parc around lunchtime.





Finally, after a long journey, the animals were about to set foot on Congolese soil! We released the animals in a 9-ha pre-release boma. This gave the animals time to regroup, and to get used to the new area, new food and new smells.



The next day the boma was opened, and the animals could roam free on 20.000 ha full of lush green vegetation!

We are proud to be part of this project, which is not just about reintroducing wildlife back into an area where none was left. It is also about education; school kids visit the Parc on a regular basis. The Parc also gives the Congolese an opportunity to experience nature, not far from Kinshasa.



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*Have a look at our video  
about the translocation  
here: [DRC Translocation  
2019](#)*





# How Dung Beetles Roll



Dung beetles evolved 65 million years ago when truly enormous mammals roamed the earth!



Dung beetles derive all their nutrition & moisture from dung, and don't need to drink!



Dung beetles do a lot more than eating dung. They recycle nutrients by breaking the dung up, improving soil quality.



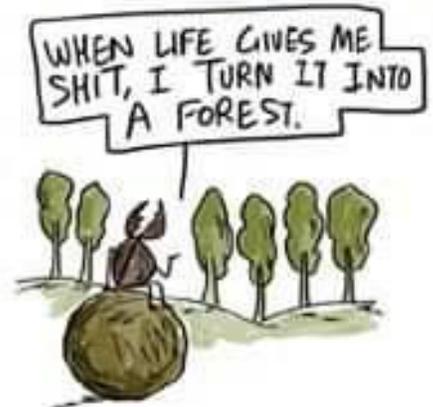
Male dung beetles use dung to woo females!



Dung beetles are among the world's strongest creatures, able to push up to ten times their body weight!



Dung beetles also disperse seeds, playing an indispensable role in forest regeneration.



Dung beetles protect cattle from pests such as hornflies, by removing the dung that hosts these pests.



Dung beetles were sacred to ancient Egyptians, and are celebrated in hieroglyphs and art!

