

# NEWSLETTER JUNE

## In this newsletter:

- 🐾 [Antlion pits](#)
- 🐾 [Winter... Pneumonia time!](#)

Dear clients,

And just like that, we are halfway through 2024 already! In this newsletter you can read about antlion pits. You have probably seen the pits before, but have you ever seen the guys making these pits? In winter, animals have a higher chance of getting a pneumonia. In our latest article we explain the disease, what can cause it, and what you can do to prevent it. The full article is available on our website. Enjoy the newsletter! Kind regards, the Wildlife Vets Namibia team.

## ANTLION PITS

When walking over sandy soil, you often see little pits. The pits might look innocent to you, but they are certainly not for ants and other little critters! At the bottom of these pits lies a ferocious predator... the antlion!

Antlions are insects, and there are around 2000 different species distributed all over the world. They belong to the neuropteran (net-winged insects) family *Myrmeleontidae* (Latin; *mymex* means ant, and *leon* means lion). The name antlion refers to the larvae, who make the impressive pits to catch their prey.

The antlion makes a pit in loose sand by moving backwards in a spiral pattern and flipping loose sand out of the pit. Amazingly, the antlion knows exactly what the best slope is – the slope is as steep as possible, and will collapse by minimal disturbance, for example, when an ant walks in. Once done, the antlion buries itself at the bottom of the pit, only the jaws are sticking out in a wide-open position. Then the waiting game begins!

When a prey walks into the trap, it is almost impossible to get out. Firstly, due to the sloping sides of the pit, the sand collapses under the prey's feet, bringing the prey to the big jaws of the antlion. If this is not enough, the antlion is able to flick sand onto the prey and the side walls, making a sand-avalanche!

The antlion then grabs the prey with its big jaws and injects a paralyzing neurotoxin. The prey is sucked dry, and the shriveled carcass is tossed out of the pit. Antlion larvae make several pits as they grow and develop. Apparently, the size of the pit does not say anything of the size of the antlion, rather how hungry he/she is! When the larva reaches its maximum size (this may take 3 years!), it undergoes a full make-over!

The adult version looks nothing like the larvae, check the photo on the left! They look a bit like a dragonfly with antennas, and are not often seen. First of all, they are nocturnal, and secondly, they don't have a long lifespan. Most live for about 25 days, some live up to 45 days.

Want to see the antlion larvae in action? Click [here to watch](#) a video of BBC Earth, taken in the Namib desert.

*Male mottled veld antlion (Palpares caffer)  
in KwaZulu-Natal, South-Africa ©  
[Alandmanson](#)*



*Pits that have been built by antlions © [A. Christaline](#)*



*Antlion larvae are usually hairy grey/brown and have an impressive set of jaws! © [M.J. Raupp](#)*

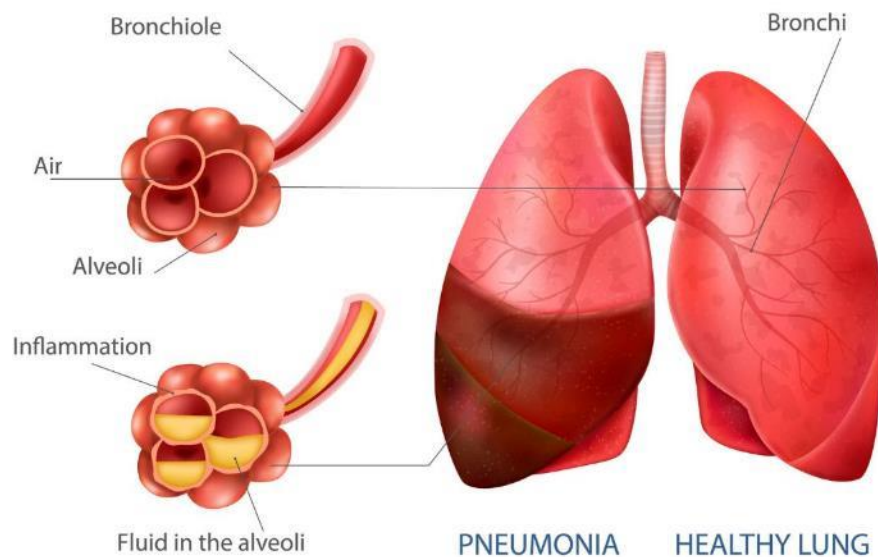


## WINTER... PNEUMONIA TIME!

As winter approaches, colds, flus and other respiratory diseases are on the rise. Not just with us humans, but certainly also in animals. Pneumonia (Afr. longontsteking) refers to inflammation of the lungs. It occurs all year round, but usually peaks in winter, and especially late winter. Cold weather, winds, dust and big temperature differences between day and night make animals more vulnerable for pneumonia. We wrote a new article on this topic, which you can find on [our website here](#). Below you can find a summary.

### What is a pneumonia?

Pneumonia is an inflammation of the lungs, and is often caused by an infectious agent, such as a virus, bacteria or fungi. A combination of factors, such as an infectious agent together with cold weather, certain types of animal management and a poor immune system can increase the risk of a pneumonia. Pneumonia causes a swelling of the tissue in part of the lung, the one lung, or both lungs, and the air sacs may fill with fluid or pus.



*Pneumonia is a condition that causes an inflammation of the air sacs in the lungs. This infection can be caused by bacteria, viruses and fungi, and the risks of a pneumonia can be increased by factors such as the weather, management practises, a poor immune system, etc. © [Continental Hospitals](#)*

### How to recognize a pneumonia?

The lungs are sensitive organs, and pneumonia can quickly kill an animal. If effective treatment is given early enough it can recover, but often the lungs are damaged for life. This becomes evident in production animals, where growth is retarded or milk production is reduced. If the animal survives the pneumonia, the affected lung tissue might transform into connective tissue, which contracts or causes adhesions. This affects the animal's lung capacity, and the production capacity of the animal over time. It is thus important to recognize and treat pneumonia early! Daily observation of the animals, and rapid examination when an animal starts showing symptoms can lead to successful treatment.

Signs of pneumonia can be: nasal/ocular/oral discharge, depression, lethargy, emaciated body condition, laboured or rapid shallow breathing, coughing, extended head and neck, and hanging ears.

It is important that you, but also your workers, look for the following signs, and take note of the timeframe of the developing symptoms:

<b>Behaviour:</b> Head up	<b>Behaviour:</b> Head hanging, stands aside	<b>Behaviour:</b> Head hanging, lags behind	<b>Behaviour:</b> Head down, not moving
<b>Eyes:</b> Dry, clean	<b>Eyes:</b> Tearing	<b>Eyes:</b> Runny	<b>Eyes:</b> Crusty
<b>Ears:</b> Alert	<b>Ears:</b> Move slower	<b>Ears:</b> Hanging	<b>Ears:</b> Hanging
<b>Nose:</b> Wet, smooth	<b>Nose:</b> Dry, watery discharge	<b>Nose:</b> Thick slime	<b>Nose:</b> Yellow slime, nose cracks
<b>Mouth:</b> Clean	<b>Mouth:</b> Clean	<b>Mouth:</b> Slightly open	<b>Mouth:</b> Hangs open, foam

No signs of disease can be seen, animal seems healthy and eats well.

First signs of disease

Cough and a watery discharge in the nostrils are the first signs of illness. The ears and head hang, and animal starts to eat less.

The nasal discharge now becomes yellow and thick. The animal stands with its head down and lags behind when the herd is rushed.

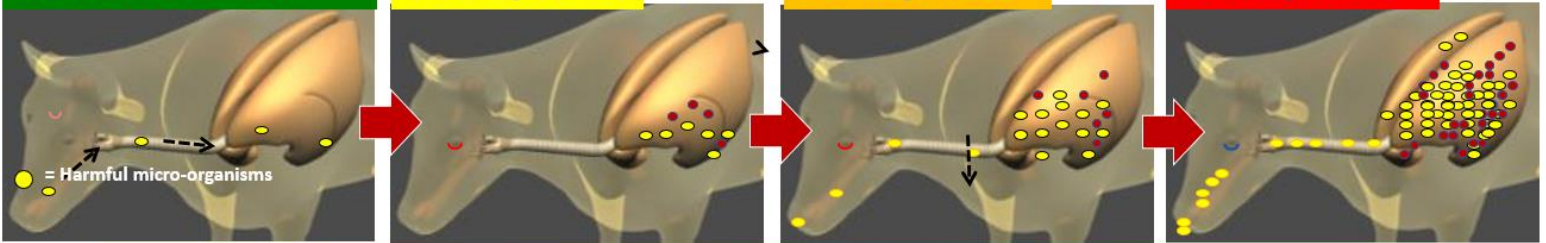
The animal struggles to breathe through the nose. Laboured breathing. Animal is too weak to stand up and now dies in most cases.

Start of infection

1-2 days later

2-3 days later

3-4 days later



Pneumonia

24-hour frame for early treatment

Infection of the lungs

Signs of pneumonia over time © Dr Danie Odendaal

Early identification of pneumonia determines the success of treatment. As soon as you or your workers see any signs of disease, the animal needs to be examined. Start by measuring the rectal temperature. If the animal has a fever ( $>40^{\circ}$ ), you can be quite sure there is a systemic infection (meaning affecting the entire body), such as a pneumonia, in the body. In such cases, call your vet and don't waste time!

When treatment is started early enough, the animal can fully recover. When treatment is started late and the animal survives, the lungs will be permanently damaged.

## Treatment

Pneumonia is a serious condition, and veterinary care and the right drugs are needed! Most antibiotics that farmers have at home are over the counter antibiotics (e.g., tetracyclines and sulphonamides). These antibiotics are 'bacteriostatic'; they suppress the growth of bacteria and work slowly. In cases of a pneumonia, the animal needs a 'bactericidal', that works quickly and kills the bacteria. These can only be obtained from a vet.

Not all antibiotics are equally effective in the treatment of pneumonia. Discuss the pneumonia outbreak with your veterinarian to ensure that he/she prescribes the optimal antibiotics. Giving an anti-inflammatory injection will also be of benefit. It is advisable to also inject the animal with a multivitamin/mineral. If possible, isolate the affected animal(s), provide improved housing (warmth/shelter from dust) and proper nutrition are further essential components.

## What predisposes to a pneumonia?

- 🐾 Dust – affects the functioning of the normal protective mechanisms of the airways.
- 🐾 Cold – affects the speed of the cilia of the airways (they work slower). Cold is a form of stress, stress increases cortisol secretion, which in turn suppresses the general disease resistance of the immune system.
- 🐾 Viruses – they can weaken the mucous membranes of the airways and they can suppress the immune system. Viruses have the best chance of making an animal sick when the animal is in a stressful situation, such as calves/lambs being weaned, animals on transport etc.
- 🐾 Malnutrition – a disturbance in both macro nutrition (energy, proteins and minerals) and micro nutrition (vitamins and trace elements) can decrease the animal's immune system. When water is not available, mucous membranes can dry out, and the natural barriers of the mucous membranes cannot function optimally.
- 🐾 Other causes of stress – in stress situations, blood supply to the liver and digestive tract is limited (blood goes to the muscles and nervous system to act quickly – fight or flight). When stress persists, it has a negative impact on the animal's metabolism. Stress situations are for example:
  - The weaning of calves/lambs
  - Change in environment (translocations)
  - Change in group composition

Remember, the weaker individuals in the group are the ones that have a higher risk of getting a pneumonia.

## Preventing a pneumonia

Farmers can take preventative measures against pneumonia by eliminating and/or limiting the predisposing factors that can lead to a pneumonia. Protect animals against dust, extreme cold weather (provide shelter), make sure there is clean water and proper nutrition available and limit stress. Make sure that you and/or your workers monitor animals closely. As soon as the first signs of a pneumonia are seen, contact your vet. Vaccination is also an important tool in limiting pneumonia. A vaccination at the beginning of winter can help to re-activate the animal's immune system. The vaccination will stimulate the making of high levels of antibodies, so when a disease-causing organism enters the body, the immune system will respond quickly.

We like to thank Dr Danie Odendaal for sharing his interesting articles with us, thanks to his insights and information we could create this article! For more information on the Pasteurella bacteria that can cause pneumonia, read our '[Pasteurellosis](#)' article. Another article which fits well with this pneumonia topic, is '[Animals and cold weather](#)'.

[Click here](#) to read  
the full article!





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